COLON

S1957 Presidential Poster Award

A Percutaneous Endoscopic Colostomy (PEC) Tube to the Rescue

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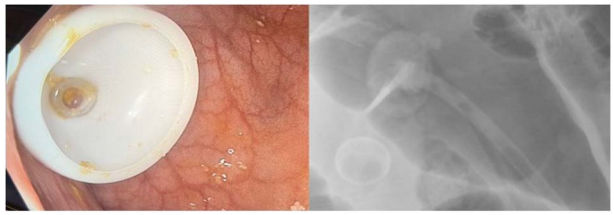
Introduction: Acute colonic pseudo-obstruction (ACPO) is a colonic distention without obstruction that can lead to catastrophic complications. Supportive care until spontaneous resolution is often successful whereas surgery in the acute setting is reserved for emergencies such as ischemia and/or rupture. We present a case of refractory ACPO successfully treated with a percutaneous endoscopic colostomy (PEC) tube.
Case Description/Methods: A 72-year-old male presented with cellulitis. He was treated with antibiotics, during which time he developed colonic distention and a diagnosis of toxic megacolon was considered. Surgery was consulted and recommended non-operative management due to his stable clinical status and significant co-morbidities including a BMI of 53. He was started on oral vancomycin and intravenous metronidazole with overall improvement clinically. After discharge, the patient continued to have diarrhea and persistent colonic distention. Readmission occurred and the Gastroenterology team performed colonoscopic decompression twice without sustained resolution of colonic distention. The decision was made to proceed with a cecostomy tube by interventional radiology. Unfortunately, despite a patent 8.5Fr cecostomy tube, the colonic distention continued to worsen mainly in the transverse colon with the diameter reaching 22 cm. The decision was made to place a higher caliber 24 Fr PEC tube in the operation room under monitored anesthesia care. The PEC tube was successfully placed endoscopically in the transverse colon without any acute complications [Figure 1]. Fortunately, the patient's colonic distention improved to less than 10 cm on follow-up abdominal x-rays.
Discussion: Patients with ACPO are often medically complex with multiple comorbidities. Non-interventional, supportive care, including removal of offending agents, correction of fluid and electrolyte imbalances and ambulation remains the preferred treatment. Should medical therapy be contraindicated or fail, endoscopic decompression is recommended with a success rate of up to 95%. Emergent surgical management is usually only reserved for those with perforation or presumed ischemia and is associated with high rates of morbidity and mortality. In challenging cases such as this, a multidisciplinary approach is needed, which can facilitate collective decision-making regarding less well-established and less invasive treatment modalities, such as PEC.



[1957] **Figure 1.** Percutaneous Endoscopic Colostomy tube in the transverse colon.

S1958 Presidential Poster Award

A Diagnosis Rarer Than My Steak: The Challenges Behind Alpha-Gal Syndrome

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Introduction: Alpha-gal syndrome (AGS) is a rare, acquired allergic reaction to mammalian meat that most commonly develops in the United States following tick exposure. The arthropod bite leads to formation of a specific IgE antibody to oligosaccharide galactose-α-1,3-galactose (alpha-gal). Patients with AGS classically present with a myriad of symptoms that can range in severity from localized pruritis to anaphylaxis. There are however a subset of patients with AGS that only present with gastrointestinal symptoms, which can present a unique diagnostic challenge. Herein, we describe a classic case of AGS in a patient with markedly elevated alpha-gal IgE levels at diagnosis that normalized following strict dietary modification.
Case Description/Methods: A 78-year-old man initially presented to the GI clinic for evaluation of a 6-month history of episodic vomiting and diarrhea occurring almost exclusively late in the evening. Symptoms would typically manifest as abrupt onset of vomiting with watery diarrhea and overwhelming malaise. Notably, he denied any history of chronic GI complaints prior to this onset. No trigger foods were initially identified and his hematologic, blood chemistry, and infectious lab evaluations were unrevealing. He then started to experience a concomitant urticarial eruption, which, in conjunction with new historical data regarding a particular tick bite exposure several months prior to symptom onset, prompted evaluation for AGS. Serologic assessment revealed significantly elevated alpha-gal IgE, which comprised a significant quantity of total serum IgE. The patient ultimately received a diagnosis of AGS and, following avoidance of beef, dairy, and gelatin-containing products, experienced normalization of both symptoms and alpha-gal IgE within one month.
Discussion: The mechanism behind the pathogenesis of AGS remains poorly understood. The clinical presentation, on the other hand, has become a more widely recognized syndrome. This patient displayed the classic gastrointestinal, dermatologic, and likely cardiovascular symptoms that are seen in AGS. This syndrome is distinct from other food allergy syndromes in that the driving allergen is a carbohydrate, of which the absorption is delayed to several hours following food exposure. This classic 3-6 hour delay from time of food exposure to onset of symptoms is the hallmark feature that makes AGS distinct from other anti-protein epitope IgE mediated allergic reactions and makes diagnosis so elusive.

S1959 Presidential Poster Award

Colonic Mucormycosis as a Complication of COVID Pneumonia: A Case Report

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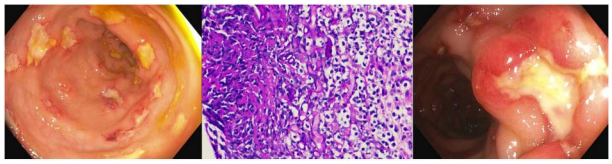
Introduction: Gastrointestinal mucormycosis is a rare infection with high mortality. Immunosuppression and uncontrolled diabetes are known to be significant risk factors for development of mucormycosis. The most common presenting symptoms include abdominal pain, fever, and perforation. Delay in diagnosis by 6 days has been shown to increase 30-day mortality from 35% to 66%. We present a case of colonic mucormycosis in a patient recovering from acute hypoxemic respiratory failure due to COVID-19 pneumonia.
Case Description/Methods: A 31-year-old male with a remote history of appendiceal neuroendocrine tumor status post right hemicolectomy and uncontrolled type 1 diabetes presented with acute hypoxemic respiratory failure due to COVID-19 pneumonia. He was treated with dexamethasone. His course was complicated by sepsis due to polymicrobial bacteremia including culture growth of MSSA, E. faecalis and Enterobacter aerogenes. Gastroenterology was consulted for diarrhea, characterized as non-bloody, watery stools up to 10 times daily. Work-up was significant for negative fecal elastase, infectious studies including Giardia, negative celiac studies, HIV, TSH and autoimmune studies. Due to concern for enteropathy or microscopic colitis, upper and lower endoscopies were performed. Colonoscopy findings were significant for multiple punched-out ulcers in the rectum, rectosigmoid colon, and sigmoid colon. Sigmoid colon biopsies were significant for the presence of fungal organisms consistent with colonic mucormycosis. Given significant pathologic findings, ongoing fevers in the setting of broad-spectrum antibiotics, rising inflammatory markers, and positive serum beta-D-glucan assay patient was treated with IV Amphotericin for 2 months. His diarrhea improved and he has not had recurrence of disease, now 10 months later (**Figure** 1).
Discussion: The COVID-19 pandemic continues to bring unprecedented challenges to all facets of healthcare. We presented a rare case of colonic mucormycosis in the setting of uncontrolled Type I diabetes, COVID-19, and systemic corticosteroids. According to a systematic review of 70 adult case reports of gastrointestinal mucormycosis, 97% of patients were diagnosed with histopathologic examination whereas culture and molecular methods were used in only 28% and 17%, respectively. In our case, eradication of the invasive fungal infection and patient survival were attributable to prompt diagnosis.



[1959] **Figure 1.** Left, Right: punched out, deep ulcerations of the sigmoid colon Middle: PAS 400X. Fungal organisms present, consistent with mucormycosis in a background of acute inflammation, ulceration, and focal necrosis.

S1960 Presidential Poster Award

Extramammary Perianal Paget Disease, Colonoscopy Findings That Led to the Diagnosis of a Genitourinary Mass

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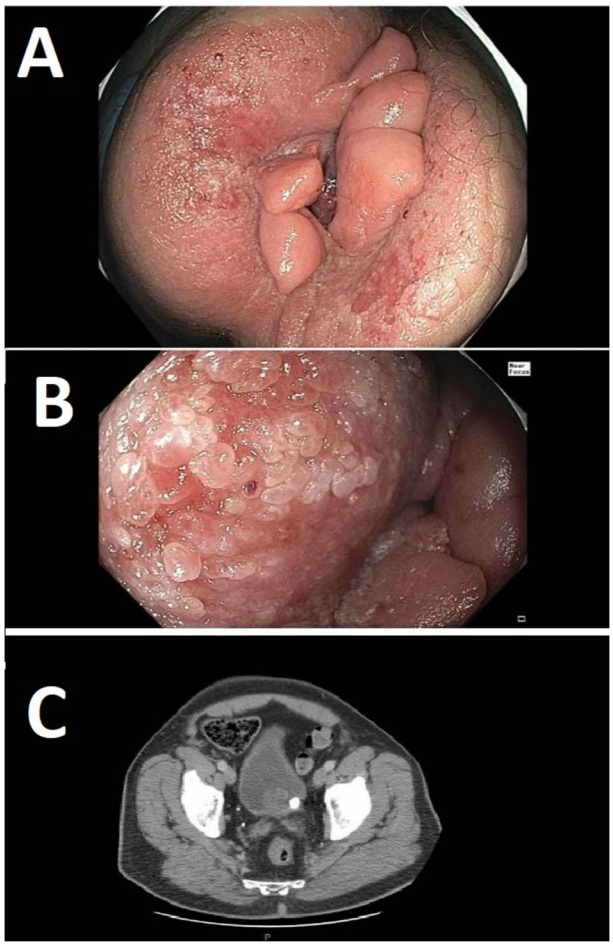
Introduction: Extramammary Paget's disease (EMPD) is a rare cutaneous malignancy most commonly affecting the genitals, perineum, and perianal area. EMPD has cellular similarities to Paget's breast cancer. It is difficult to estimate the true incidence of perianal Paget disease (PPD) due to its rarity but it is thought to represent 1.3% of all cases of Paget disease. We present a case of a 75-year-old White male who underwent a screening colonoscopy and was found to have perianal dermatitis which was biopsies and found to be PPD.
Case Description/Methods: A 75-year-old White male underwent a colonoscopy for surveillance due to history of tubular adenomatous polyps. Eleven sub-centimeter polyps were resected, none of which showed evidence of colorectal adenocarcinoma. During the procedure, perianal exam revealed irregular circumferential erythematous rash. He was referred to colorectal surgery who performed a perianal skin biopsy which revealed extramammary Paget's disease. A computerized tomography of the chest, abdomen and pelvis was performed due to concern for secondary Paget's disease which revealed a calcified lesion in the left vesico-ureteral junction for which he will undergo evaluation by urology due to concern for malignancy.
Discussion: This case highlights the importance of careful examination of the perianal region during colonoscopy and the importance to maintain EMPD among the differential diagnosis for perianal dermatitis. There are 2 types of PPD; primary PPD represents carcinoma in situ of the apocrine gland ducts, whereas secondary PPD is thought to occur from intraepithelial spread of a separate underlying carcinoma. Clinically patients may present with anal pain or pruritus, but some may be asymptomatic, as shown in our case. On examination, it appears as a slow-growing, erythematous plaque in the perianal region. PPD has been associated with synchronous or metachronous genitourinary and/or gastrointestinal malignancies. It is recommended that patients undergo screening for these malignancies but the appropriate frequency of surveillance remains unknown. When confirmed on biopsy, clinicians should closely monitor PPD for local progression and screen all patients for distant and local neoplasms.



[1960] **Figure 1.** A and B, Perianal erythematous rash and hemorrhoids. C, Left calcified mass at vesico-ureteral junction measuring 1.3 cm.

S1961 Presidential Poster Award

Isolated Cardiac Metastasis as an Initial Presentation of Colorectal Cancer in a Young Male Due to Lymphatic Spread

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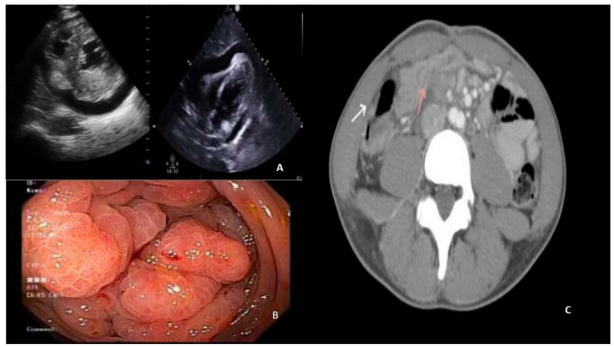
Introduction: Malignant pericardial effusion is common, reported in 5–15% of cancer patients. It most commonly arises from metastasis of lymphomas and tumors of the lung, breast, and, infrequently, the gastrointestinal tract. We report a rare case of metastatic colon cancer without the direct involvement of other solid organs suggesting a lymphatic spread.
Case Description/Methods: A 28-year-old man presented with one day of sudden onset of shortness of breath at rest. Vitals were significant for tachycardia. On examination, the lungs were clear to auscultation with distant heart sounds; the abdomen was soft without tenderness. The clinical presentation was suggestive of pericardial effusion. Laboratory studies revealed microcytic anemia with hemoglobin of 11.7 g/dl. CT angiography chest with contrast revealed moderate to large PEff and subsegmental pulmonary embolism. An ECHO showed large PEff, without any signs of tamponade. He underwent video-assisted thoracoscopic surgery for PEff with a pericardial window. The mediastinal lymph node biopsy and pericardial fluid cytology showed metastatic adenocarcinoma cells. A CT scan of the chest/abdomen/pelvis was performed to find the primary malignancy, which revealed a segmental thickening of the proximal ascending colon and ileum with proximal cecal distension, lymphadenopathy, without liver metastasis. A CF showed a large polypoidal mass in the ascending colon, and biopsy revealed poorly differentiated adenocarcinoma in ascending colon. He was started on palliative chemotherapy with capecitabine, oxaliplatin, and bevacizumab and was discharged with outpatient oncology follow-up (**Figure**).
Discussion: Colorectal cancer (CRC) is the third most common cancer in the United States. It primarily spreads hematogenous via the portal venous system that drains the colon and proximal rectum to the liver and the lungs to the heart. However, cardiac metastasis is rare. In our patient, we assume lymphatic spread of colon cancer due to isolated pericardial involvement in the absence of solid organ involvement. To our knowledge, this is the second reported case of lymphatic spread of colon cancer. Therefore, we emphasize considering pericardial effusions as a marker of occult malignancy to facilitate rapid diagnosis and prompt treatment. However, the prognosis for carcinomatous pericarditis is poor, with a 2-5 months median survival.



[1961] **Figure 1.** A-Echocardiogram: Parasternal short axis view showing large pericardial effusion, no signs of cardiac tamponade. B-Colonoscopy showing a lobulated mass in cecum. C-Computed Tomography (C.T.) scan with PO/IV contrast showing mass vs segmental inflammation in proximal ascending colon (pink arrow). Mild thickening of terminal ileum (white arrow).

S1962 Presidential Poster Award

Management of a Retracted Colostomy With Esophageal Stent

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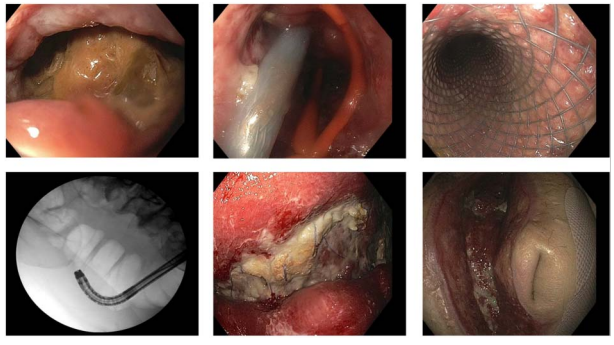
Introduction: Stoma retraction resulting from inadequate mobilization of the colon is seen in 1-6% patients undergoing colostomy. It is usually managed by surgical revision. We discuss successful management of such a case unamenable to surgical revision by an esophageal stent placement.
Case Description/Methods: A 36-year-old obese man with paraplegia from gunshot wound, stage 4 sacral decubitus ulcer, and urostomy tube placement presented to ER with fever, vomiting, diarrhea and infection of his sacral wound. He was diagnosed with osteomyelitis of the right ischium and inferior pubic ramus. To avoid fecal contamination of sacral wound, surgery created a diverting sigmoid loop colostomy which 5 days later retracted deep to the level of fascia along with gross fecal leakage through a fistulous track at the laparotomy site. A revision of the retracted colostomy was unsuccessful due to dense intra-abdominal adhesions. (**Figure**). Gastroenterologic evaluation with a colonoscopy through the stoma showed a moderately stenosed retracted colostomy with gross fecal leakage through mid-line wound. A 23 mm x 155 mm fully covered esophageal stent was then placed within the afferent loop (descending colon) of the colostomy to divert the fecal matter to colostomy bag. (Figure). The outer end of the stent was sutured to abdominal wall skin. Following this, fecal leakage stopped completely through the mid line wound, and he was discharged home. Over the next 3 weeks, his course was complicated by an episode of external migration of the stent addressed with similar stent replacement followed by fixation of the inner end of stent to the colon wall using lassoes and resolution endo-clips, and the outer end to the abdominal wall skin with surgical sutures. He continues to do well as of today on a regular yet stent favorable diet along with a bowel regimen with Miralax producing a good stool output through colostomy, and to date, there was no fecal leakage through the mid line wound.
Discussion: Stoma retraction is a common early post-colostomy complication often requiring months to heal with conservative management with frequent wound care. Surgical revision of retracted stoma or creation of an upstream stoma was not possible in our case due to dense adhesions. A covered esophageal stent was thus placed for the management of the retracted stoma with a favorable outcome thus far. Review of literature showed only one case using esophageal stent in similar clinical scenario with a successful clinical outcome.



[1962] **Figure 1.** A: Fecal contamination of mid-line wound through retracted colostomy, B: Esophageal stent placement in the afferent loop of the colostomy in progress, red rubber catheter at the site of retracted stoma placed by surgery during colostomy revision attempt, C: Stoma site following fully covered esophageal stent placement, D: Fluoroscopy image confirming esophageal stent placement, E: Midline wound free of fecal contamination 5 days after stent placement, F: Midline wound in 3 weeks after the stent placement.

S1963 Presidential Poster Award

McKittrick-Wheelock Syndrome: A Case Report and Review of Literature

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Introduction: McKittrick-Wheelock syndrome is a rare condition caused by a giant rectal villous adenoma that secretes massive quantities of electrolyte-rich mucin. It leads to severe hyponatremia, hypokalemia, dehydration, and renal failure. We report a case of McKittrick-Wheelock syndrome caused by a 25 cm rectal adenoma, the largest such lesion to date.
Case Description/Methods: A 75-year-old man with no past medical history was admitted to the hospital for 3 days of severe generalized weakness, near syncope, oliguria and worsening diarrhea. The patient had had chronic diarrhea for the past 6 months, averaging 10 large, cloudy, whitish, mucous, non-bloody liquid stools daily. He had lost 20 lbs. He was found to have severe hyponatremia (sodium 112), hypokalemia (potassium of 1.6), and acute renal failure (BUN 85, Cr 4.3). The patient became hemodynamically unstable, requiring transfer to the ICU for vasopressors, aggressive intravenous fluid resuscitation, and electrolyte replacements. He underwent a colonoscopy which showed a giant villous polyp in the rectum from the dentate line to 25 cm proximally. Biopsies showed villous adenoma. He was diagnosed with McKittrick-Wheelock syndrome. The patient underwent a robotic abdomino-perineal resection with a permanent end colostomy. His diarrhea resolved. Renal failure resolved with normalization of sodium, potassium, BUN and Cr. Two years later, the patient has done well with no recurrence of symptoms.
Discussion: In the medical literature, there are about 50 cases of McKittrick-Wheelock syndrome, caused by large villous adenomas ranging from 7 to 18 cm in size. Our case report describes a 25 cm adenoma, the largest lesion reported to date. The postulated mechanism is that the villous adenoma releases prostaglandin E2, which is a secretagogue that leads to massive loss of sodium, potassium, and fluids. Treatment consists of aggressive electrolyte and fluid replacement followed by surgical resection.

S1964 Presidential Poster Award

Metastatic Renal Cell Carcinoma Involving the Colon: An Unusual Cause of Lower Gastrointestinal Bleeding

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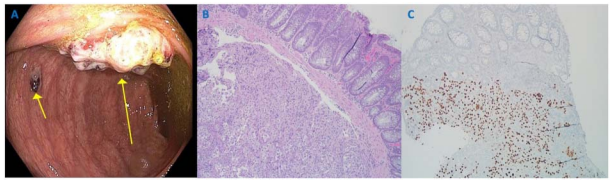
Introduction: Renal cell carcinoma (RCC) is a common tumor of the kidney. RCC will frequently metastasize to the lungs, brain, liver and brain. Metastatic RCC in the gastrointestinal tract is very rare. Here we report a case of a patient presenting with hematochezia found to have metastasis of RCC to the colon.
Case Description/Methods: 72 year old male with a history of metastatic renal cell carcinoma to the brain and bone, status post chemotherapy immunotherapy and right nephrectomy in 2020, most recently switched to cabozantinib, presented to our emergency department with lethargy and hematochezia. Hemoglobin on presentation was 4.6 g/dL. After resuscitation with intravenous fluids and blood products, the patient underwent an urgent colonoscopy which showed scattered polypoid lesions that were bluish in color, ulcerated and inflammatory appearing in the sigmoid colon, transverse, ascending colon and cecum. The largest lesion was found in the ascending colon and was at least 1 to 2 cm in size with central ulceration. The lesions were biopsied with cold biopsy forceps and sent for histopathological evaluation. On microscopic examination of the sections, a neoplasm arranged in compact nests and sheets of cells with clear cytoplasm and distinct membrane was noted.The tumor cells on immunostaining were positive for vimentin, carbonic anhydrase 9, CD10, AE1/AE3 and PAX8 supporting the diagnosis of metastatic renal cell carcinoma. Patient opted for hospice care given extensive and incurable state of disease with ultimate goal of pursuing comfort measures for the remainder of his life. He passed away 2 months after the diagnosis of metastatic RCC to the colon (**Figure**).
Discussion: Renal cell carcinoma is the most common type of kidney tumor. The highest rates are observed in North America and Czech Republic. RCC is twofold more common in men compared to women and occurs in the sixth to 8 decade of life. RCC rarely metastasize to the gastrointestinal tract. Metastasis to the colon compared to the stomach and small bowel is very rare. The most common type of RCC is clear cell type as was seen in our patient. In patients with colonic metastasis of RCC, the overall 5 year survival is less than 10%. Our patient only survived 2 months after diagnosing metastatic disease to the colon. Therefore, metastatic RCC in the colon should be kept in the differential diagnosis of patients with lower GI bleeding especially in patients with prior history of kidney mass or nephrectomy.



[1964] **Figure 1.** On endoscopic examination, a bluish polypoid lesion (small yellow arrow) and a large ulcerated mass (larger yellow arrow) were seen in the ascending colon near the cecum (1A). On microscopic low power (100X) haematoxylin and eosin (H&E), tumor cells with clear cytoplasm arranged in sheets and nests were seen in the submucosa beneath normal overlying colon mucosa (1B). Immunohistochemistry stains were positive for Pax8, a marker of renal origin, in tumor cells (1C).

S1965 Presidential Poster Award

Metastatic Melanoma to the Cecum 10 Years After Surgical Resection of the Primary Cutaneous Tumor

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Introduction: Malignant melanoma is a form of skin cancer which has a tendency for metastasis, most commonly to lymph nodes, lung, liver, and brain. Primary melanoma rarely metastasizes to the colon. We report a rare case of metastatic melanoma to the cecum 10 years after surgical resection of the primary cutaneous tumor.
Case Description/Methods: A 72-year-old man presented with 1 year of intermittent vague right-sided abdominal pain, occasional diarrhea, fatigue and weight loss of 20 lbs. He had a history of cutaneous melanoma on the right shoulder which had been treated by a wide margin resection 10 years prior. He was found to have anemia with Hgb of 9.9. CT scan showed a 5 cm soft tissue mass in the cecum suggestive of a neoplasm. The patient underwent a colonoscopy which showed a 5 cm ulcerated mass in the cecum. The mass oozed fresh blood. Spot ink was injected to tattoo the area. Multiple biopsies were taken. Pathology showed multiple sheets of large pleomorphic cells with a moderate amount of eosinophilic cytoplasm and bubbly chromatin. Mitotic figures were abundant. There was associated necrosis. Immunostains SOX10 and HMB45 were positive, consistent with metastatic melanoma. The patient underwent a right hemicolectomy with end-to-end ileocolic anastomosis. Pathology confirmed the diagnosis of metastatic melanoma with involvement of the mucosa, submucosa and muscularis. The surgical margins and all 22 lymph nodes were negative of tumor. BRAF mutation was negative. The patient was placed on immunotherapy with no adverse effects. All his symptoms resolved. One year later, the patient underwent a follow-up colonoscopy which showed no recurrence of melanoma.
Discussion: The incidence of malignant melanoma has been rising around the world, having increased by 360 % since the 1970s. Melanoma has a tendency to spread to other melanocyte-containing organs. Metastatic melanoma to the colon is uncommon due to the relative scarcity of melanocytes in the colon. Surgical resection is indicated for isolated lesion and for symptomatic relief. Cytotoxic chemotherapy is ineffective, but immunotherapy has emerged as a promising treatment option.

S1966 Presidential Poster Award

A Case of Isolated Colonic MALT Lymphoma and Synchronous Celiac Disease

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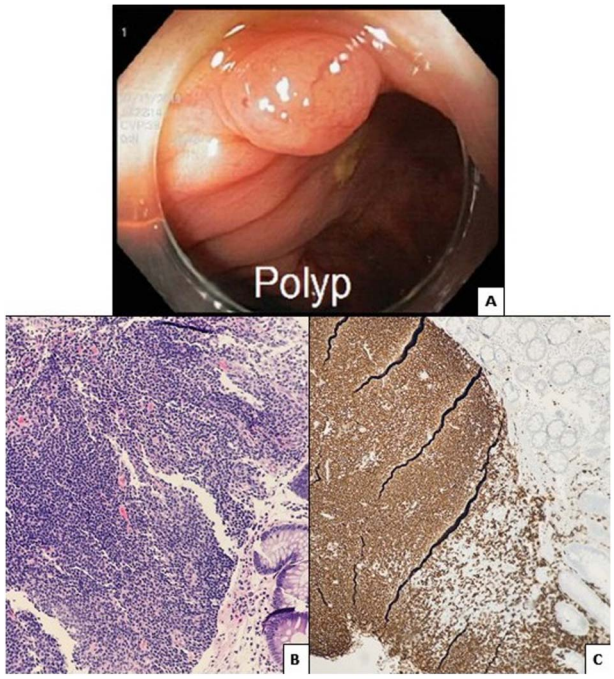
Introduction: Extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT lymphoma) is uncommon, accounting for 5% of all non-Hodgkin lymphoma (NHL). The most common site is the stomach with isolated colonic involvement comprising only 2.5% of all MALT lymphomas and less than 0.5% of all colon cancers. Up to 50% of cases are asymptomatic with a variable endoscopic appearance (polypoidal, ulcerative or mass-like) and there is a lack of clear guidance on management. While gastric MALT lymphomas are strongly linked to active Helicobacter pylori (H. pylori) infection they have also been associated with autoimmune diseases such as celiac disease (CD); a link that is uncertain with the colonic variety.

Case Description/Methods: A 50-year-old male underwent a screening colonoscopy notable for lymphoid aggregates and multiple irregular, small, sessile polyps. Histopathological and immunohistochemical analysis confirmed multifocal stage I MALT lymphoma. Positron emission tomography showed FDG uptake in a thickened duodenum and jejunum without corresponding findings on subsequent enteroscopy. Gastric biopsies were negative for H. pylori but small bowel biopsies were consistent with CD which was confirmed with elevated serum IgA anti-tissue transglutaminase antibodies (anti-TTg IgA). Neither radiation therapy nor surgery were pursued due to the extent of disease, the significant expected morbidly, and the low stage of the lymphoma. After initiating a gluten free diet his anti-TTg IgA normalized and the small bowel FDG avidity resolved. He had no metastatic disease and serial endoscopies have allowed resection of additional lesions (**Figure**).
Discussion: While a causal relationship between enteropathy-associated T-cell lymphoma and CD is well established, data supporting an increased risk of MALT lymphoma is less robust, but present in the literature with an estimated odds ratio in one study of 3.5. The overall risk of NHL lymphoma in CD is higher when there is active inflammation in the small bowel and lower when CD is quiescent. While current treatment of colonic MALT lymphoma includes surveillance for low stage disease with the possibility of chemotherapy or resection, the prognosis is excellent regardless of therapeutic modality. There is insufficient data at this time to recommend treatment of synchronous CD as an adjunct, but this would theoretically be of benefit and warrants further investigation.



[1966] **Figure 1.** Macro- and microscopic findings. (A) Colonoscopy shows a 4-6 mm sized sessile polyp arising in the cecum. (B) Endoscopic biopsy specimen shows a diffuse and dense infiltration of small-sized lymphocytes and lymphoepithelial lesions in the colonic mucosa (H&E staining, ×20). (C) Immunohistochemical staining shows markedly increased infiltrative small-sized lymphocytes with positivity for B-cell marker CD20 (×20).

S1967 Presidential Poster Award

Pre-Operatively Confirmed Idiopathic Myointimal Hyperplasia of the Mesenteric Veins

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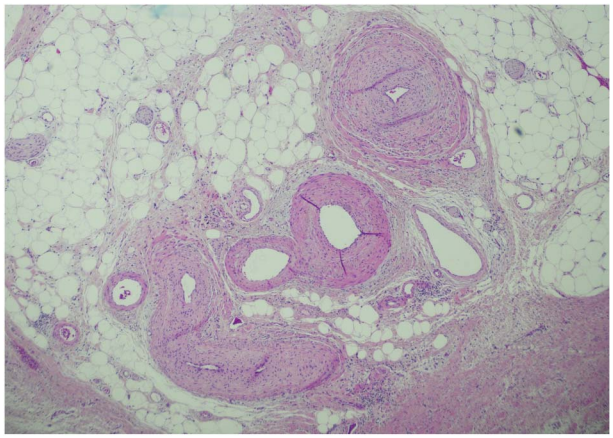
[1]University of Arizona College of Medicine, Phoenix, AZ; [2]Phoenix VA Health Care System, Phoenix, AZ; [3]St. Joseph's Hospital and Medical Center, Phoenix, AZ; [4]Darmouth Hitchcock Medical Center, Lebanon, NH.

Introduction: Idiopathic myointimal hyperplasia of the mesenteric veins (IMHMV) is an extremely rare and poorly understood diagnosis first described in the literature in 1991, and since, has sparsely been seen in a small number of case reports. IMHMV is caused by proliferation of intimal smooth muscle of the mesenteric veins leading to venous narrowing, ultimately causing colonic venous ischemia by non-thrombotic occlusion. It presents with nonspecific gastrointestinal complaints and is often misdiagnosed, causing a prolonged clinical course and worse outcomes. Specific histologic findings are associated with IMHMV include "arteriolization" of capillaries, subendothelial hyaline deposits, and fibrin thrombi. Final diagnosis confirmed after surgical resection of the affected colon, as initial biopsies are not deep enough to confirm the diagnosis.
Case Description/Methods: A 73-year-old man with a history of hypothyroidism, hyperlipidemia, and deep venous thrombosis presented with a one-year history of 10-14 episodes of watery diarrhea daily, abdominal pain, and 15-pound weight loss. Subsequent lab workup was negative, except for elevated CRP 9 mg/L. Bidirectional endoscopy revealed erythematous, edematous, and friable mucosa with superficial ulceration most significantly involving the colon 50-70 cm from the anal verge. Biopsies revealed an increased lamina propria vascularity with proliferation of muscularized capillaries, patchy active colitis with erosion and injured and withered crypts, consistent with IMHMV. CT angiography showed edematous walls extending from the mid-transverse colon to the mid-sigmoid colon with moderate inflammation and collateral arteries and veins. Two pathologists from different institutions agreed that the findings were consistent with IMHMV (**Figure**). Patient ultimately underwent laparoscopic total abdominal colectomy to distal one third of rectum with end ileostomy with no further symptoms after resection.
Discussion: This case is one of the only pre-operatively diagnosed cases of IMHMV documented in the literature, as almost all are diagnosed after surgical resection. IMHMV is a mimicker as it presents with nonspecific symptoms and causes edema, fat stranding, and friable mucosa with ulcerations, much like the findings of IBD and ischemic colitis. IMHMV should be on the differential in cases of nonspecific colitis, as misdiagnosis and treatment with corticosteroids and immunomodulatory agents can lead to poorer outcomes.



[1967] **Figure 1.** Low-power photomicrograph showing veins with myointimal thickening with the associated normal artery (center).

S1968 Presidential Poster Award

Pregnancy With a Twist: A Case of Sigmoid Volvulus in the Third Trimester

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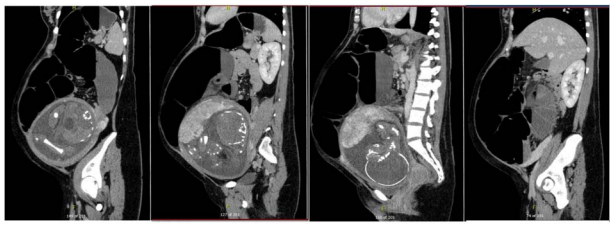
Introduction: Sigmoid volvulus is a rare cause of bowel obstruction in the general population and particularly in pregnancy. Here, we present a case of a young woman in her third trimester presenting with acute sigmoid volvulus.
Case Description/Methods: A 27-year-old woman with no prior medical history who was 31 weeks pregnant presented with 4 days of progressive abdominal pain and distension with associated obstipation, nausea, vomiting and decreased oral intake. Her surgical history was pertinent for prior cesarean section and right laparoscopic salpingectomy. Her vital signs are normal. Her abdomen is distended and tender to light palpation with guarding and rebound tenderness. CBC and CMP are within normal limits. A computed tomography (CT) scan of the abdomen and pelvis showed large bowel distension up to 10.5 cm with air fluid levels and twisting of the mesentery at the sigmoid colon. Based on these findings, she was diagnosed with sigmoid volvulus. The patient was emergently taken to the operating room for endoscopic sigmoid volvulus reduction. A therapeutic colonoscopy revealed a sigmoid volvulus with health appearing mucosa which was successfully traversed and detorsion was performed. A nasogastric tube was placed in the rectum with the proximal tip near the hepatic flexure for decompression.The patient's abdominal pain improved significantly after colonic decompression. Three days later, she underwent definitive open sigmoidectomy with primary anastomosis. Three days later, the patient had vaginal bleeding along with contractions and had breech vaginal delivery of a male infant (Figure).
Discussion: Sigmoid volvulus in pregnancy is rare but should be included within the differential diagnosis for abdominal pain as a delay in diagnosis or late presentation can result in significant morbidity and mortality for mother and fetus. Delays in diagnosis are associated with high rates of morbidity and mortality for the mother and fetus. Maternal complications include sepsis, peritonitis, and bowel perforation. Fetal complications include pre-term delivery, intrauterine death, and neonatal sepsis. Endoscopic decompression is successful in 75-95% of cases. Elective surgery is recommended after endoscopic detorsion. Finally, it is important to have a multi-disciplinary approach with colorectal surgeons and obstetricians in the management of sigmoid volvulus in pregnancy.



[1968] **Figure 1.** Sagittal view of abdomen and pelvis CT Scan.

S1969 Presidential Poster Award

Treatment of Refractory ICI-Associated Colitis With Fecal Microbiota Transplant

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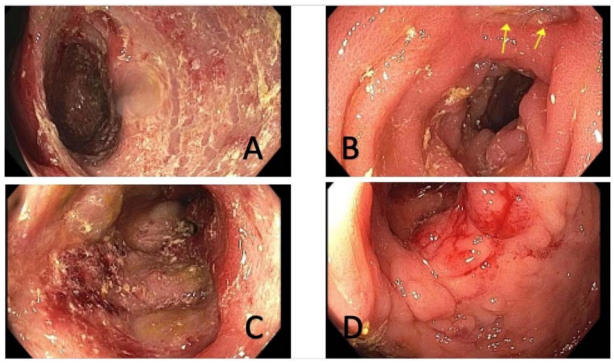
Introduction: The clinical benefits of immune checkpoint inhibitors (ICIs) have been associated with immune-related adverse events (irAEs), with ICI-associated colitis among the most reported. ICI-associated colitis is routinely treated with immunosuppressive therapy, including corticosteroids and anti-TNF agents. Recent studies have suggested fecal microbiota transplant as a potential treatment for refractory ICI-associated colitis.
Case Description/Methods: Middle aged female with multiple sclerosis in remission and stage IV melanoma with bone and pulmonary involvement who was first diagnosed about 3 years ago. She underwent palliative radiation followed by 4 cycles of ipilimumab and nivolumab initially. Despite this therapy she had cancer progression. She was then started on treatment with cisplatin, vinblastine and dacarbazine (CVD), however she failed to respond. She was switched to targeted therapy with encorafenib and binimitinib. Within 2 months, she was admitted to the hospital with anemia and hypotension, endoscopic evaluation revealed multiple intestinal and colonic ulcers. Based on these findings she was suspected to have ICI enterocolitis and received 2 cycles of infliximab plus high dose corticosteroids. She resumed encorafenib and binimitinib after clinical improvement and started single agent nivolumab. She was readmitted within 3 months and again at 4 months after for anemia and melena despite receiving additional treatment with vedolizumab and multiple courses of high dose corticosteroids. She was then treated with ustekinumab; however, she was again hospitalized a fourth time for similar symptoms. Decision was made to treat her refractory colitis with fecal microbiota transplant (FMT) as compassionate use. She had a remarkable response, with complete resolution of her GI symptoms with no additional immunosuppressive therapy or hospitalizations. However, patient's cancer continued to progress. Her course was further complicated by oculomotor nerve dysfunction and ultimately was transitioned to hospice care and passed away 4 months later (**Figure**).
Discussion: Fecal microbiota transplant has emerged as novel therapeutic option for treatment of refractory ICI-associated colitis. Combination treatment with ICI and targeted therapy may be a risk factor for more severe colitis with significant ulcers and refractory disease course. Further studies are needed to assess the risk factors related to combination therapy and guide more effective treatment.



[1969] **Figure 1.** A: Altered anatomy near cecum, B: Ulcer in terminal ileum, C: Ulcerated mass in ascending colon, D: Ascending colon narrowing.

S1970 Presidential Poster Award

When GI Endoscopy Shines a Light on the Endometrium

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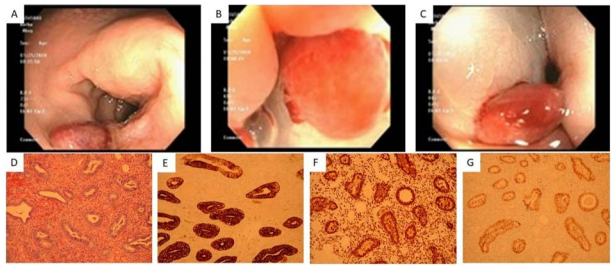
Introduction: The differential diagnosis for gastrointestinal bleeding ranges from more benign conditions, such as hemorrhoids, to more serious ones, such as colorectal cancer. Therefore, colonoscopy is an important diagnostic tool.
Case Description/Methods: A 48-year-old female presented with hematochezia. She denied abdominal pain, change in stool caliber, or weight loss. Her surgical history was significant for total abdominal hysterectomy and bilateral salpingo-oophorectomy 6 years prior for an endometrioma and endometriosis presenting as a painful pelvic mass. Subsequent colonoscopy revealed a 15 mm and a 2 mm polyp in the proximal rectum (**Figure** A-C). The polyps were described as sessile, hypervascular, and bled easily. Tattoos were placed for surgical consultation. The patient was consented for endoscopic removal and surgical intervention if needed. Upon endoscopic manipulation, the polyps seemed to "peel off the mucosa." Pathological examination demonstrated epithelial cells that were positive for estrogen receptor, PAX8, and CK7 (**Figures** D-G). The stromal cells were positive for CD10. These findings were suggestive of hyperplastic Müllerian/endometrial type polyps with focal glandular atypia and squamous metaplasia. Three years later, repeat colonoscopy was largely unremarkable, with pathology at the biopsy site showing no active or chronic inflammation.
Discussion: Bowel endometriosis most commonly occurs in the rectum, and approximately ⅓ present with rectal bleeding.[1,2] Her surgical history raises an important consideration of whether the tissue was seeded in the rectum prior to hysterectomy, the tissue migrated from ectopic endometrial tissue elsewhere post-hysterectomy, or the rectal tissue underwent metaplasia. Interestingly, it was noted that she was using an estradiol transdermal patch on initial consultation. This is significant since endometrial tissue is estrogen-sensitive and may have promoted this presentation.



[1970] **Figure 1.** (A-C): rectal polyp. (D) H&E, (E) CK7, (F) estrogen receptor, and (G) PAX8 were positive, consistent with endometrial-type polyps.

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S1971 Presidential Poster Award

Waldenstrom Macroglobulinemia: A Malignant Mimicker of IBD

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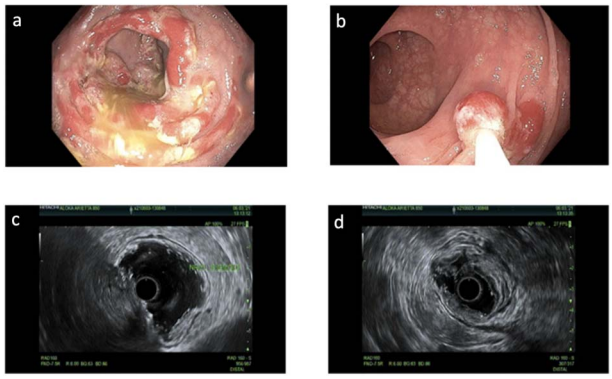
Introduction: Waldenstrom macroglobulinemia (WM) is a lymphoplasmacytic lymphoma in the bone marrow with IgM gammopathy in the blood. Annually ~1400 cases are diagnosed in the US, with typical presentation of B symptoms, fatigue, neuropathy, and mucosal bleeding. Only 3% of patients present with colonic symptoms. We describe a case of WM with rectal involvement presenting as bloody diarrhea, mimicking inflammatory bowel disease (IBD).
Case Description/Methods: A 56-year-old man with depression, anxiety, and fibromyalgia presented with 6 months of diarrhea with mucous and rectal bleeding. He underwent upper endoscopy and colonoscopy with *Helicobacter pylori* gastritis, proctitis, and inflammatory polyps. He symptoms worsened despite rectal mesalamine, including weight loss and night sweats. Budesonide oral and foam resolved the bleeding but diarrhea continued despite rifaximin. Around this time, he was thought to have irritable bowel syndrome. Two years later, he had recurrence of daily bowel movements with mucous and rectal bleeding, plus fecal incontinence, tenesmus, and rectal and abdominal pain. He also noticed myalgias, arthralgias, parasthesias, fatigue, and chills. Rheumatology suggested fibromyalgia as the culprit, in part due to elevated ESR. After his GI symptoms renewed suspicion for IBD, repeat colonoscopy showed a 3 cm rectal mass with ulcer and stenosis at the recto-sigmoid colon. Biopsies showed eosinophilic proteinaceous material positive for PAS-D, negative for fibrosis and amyloid and concerning for malignancy. EUS confirmed inflammatory polyps and rectal thickness (Fig**ure** 1). Hematology performed immunofixation with faint monoclonal IgM-lambda, and bone marrow biopsy confirmed lymphoplasmacytic lymphoma concerning for WM.
Discussion: WM rarely involves the GI tract, with fewer colonic and rectal presentations than small bowel. The IgM deposition can cause severe malabsorption, steatorrhea, obstructive symptoms, or GI bleeding. Especially in cases of bloody stools and localized colonic thickening, WM can be mistaken for IBD. In our case, factors more suggestive of WM included degree of colonic thickening and pathologic PAS-D positivity. Particularly, raised lesions should prompt investigation for malignant processes, despite surrounding inflammatory changes. Diagnosis of WM usually involves multiple specialists and procedures such as bone marrow biopsy. WM treatment includes bruton tyrosine kinase inhibitors or bendamustine with rituximab, the latter of which improved our patient's GI symptoms.



[1971] **Figure 1.** Image 1. Colonoscopy and lower endoscopic ultrasound (EUS) visualized circumferential wall thickening and stenosis in rectum, with polyps and stenosis in sigmoid colon. a. During colonoscopy, a benign-appearing, intrinsic moderate stenosis measuring 4 cm in length was found in the recto-sigmoid colon, due to circumferentially congested edematous polypoid mucosa with overlying exudate. b. Several 10 to 16 mm sessile polyps were seen with inflammatory appearance in the sigmoid colon. c-d. During EUS, circumferential wall thickening was found in the rectum at the superficial and deep mucosa. There was no evidence of an infiltrative subepithelial mass. The muscularis propria layer was normal throughout.

S1972 Presidential Poster Award

A Rare Association of Colonic Malakoplakia With Type 2 Diabetes Mellitus

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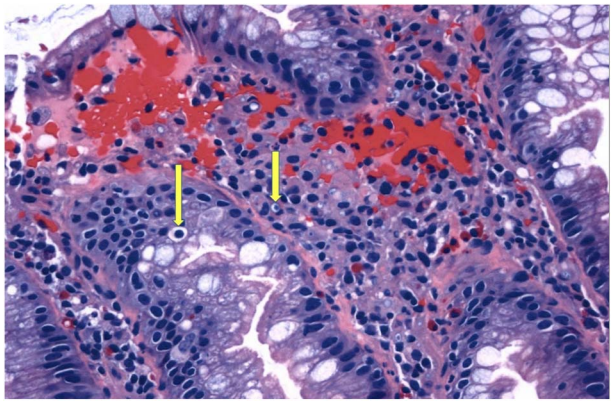
Introduction: Malakoplakia is a rare inflammatory, granulomatous disorder that can affect multiple organs such as the brain, adrenal glands, genitourinary and gastrointestinal tracts. The exact pathogenesis is not known but is postulated to be secondary to a macrophage defect resulting in impaired bactericidal activity. Malakoplakia affecting the gastrointestinal tract commonly involves the colon. It is a rare condition and most cases of colonic malakoplakia that have been reported were associated with an underlying immunosuppressive etiology. We present a rare case of colonic malakoplakia in a patient with longstanding history of type 2 diabetes mellitus (T2DM) in the absence of any other previously reported immunosuppressive etiologies.
Case Description/Methods: A 54-year-old female with past medical history of morbid obesity, dyslipidemia, T2DM for 20 years, hyperplastic colon polyps underwent routine screening colonoscopy. Colonoscopy showed a 6 mm polyp in the cecum which was resected and retrieved. Histopathological examination of the polyp revealed fragments of hyperplastic polyp, macrophage infiltrates with intracytoplasmic inclusions known as Michaelis-Gutmann bodies that are diagnostic of Malakoplakia (**Figure**). Deeper level sections failed to show any evidence of adenoma or sessile serrated lesion. Patient tested negative for Hepatitis B, C and HIV. Age related cancer screening was unremarkable. It was concluded that patient's longstanding history of T2DM rendered her immunocompromised, therefore predisposing her to develop colonic malakoplakia.
Discussion: So far, there are only a few case reports citing malakoplakia of the gastrointestinal tract due to immunocompromised states such as ongoing chemotherapy, post organ transplant recipients, inflammatory bowel disease and lymphoma. We report a unique association of colonic malakoplakia with T2DM and possibly with metabolic syndrome in a patient with morbid obesity and dyslipidemia. We highlight an etiology that has not been thoroughly studied and considering the global prevalence of T2DM, colonic malakoplakia maybe more common and likely goes undiagnosed. It is important to establish an accurate pathological diagnosis of malakoplakia as it may be mistaken for a malignant or premalignant colonic lesion causing unnecessary therapeutic interventions. It is easily treatable with antibiotics such as Bactrim, Rifampin and Fluoroquinolones. Awareness of this rare condition is key in early detection and adequate treatment.



[1972] **Figure 1.** Cecum polyp: fragments of hyperplastic polyp. Noted within the hyperplastic polyp fragments are macrophage infiltrates with intracytoplasmic Michaelis-Gutmann bodies (yellow arrows) diagnostic of Malakoplakia. Background mixed of non-specific inflammation is also present.

S1973 Presidential Poster Award

A Rare Case of McKittrick Wheelock Syndrome

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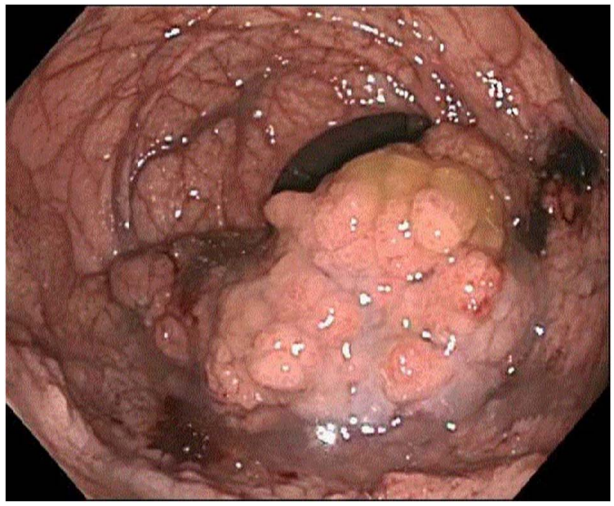
Introduction: McKittrick Wheelock Syndrome (MWS) is a rare disorder characterized by distal colorectal tumors, most commonly benign secretory villous adenoma leading to secretory diarrhea with electrolyte depletion syndrome. Patients present with volume depletion, severe electrolyte derangement, specifically hyponatremia and hypokalemia, along with acute kidney injury (AKI). We present a rare case of an elderly female with severe electrolyte derangement in setting of MWS.
Case Description/Methods: A 71-year-old woman with history of 4 months of watery diarrhea, fatigue, and anorexia presented after a syncopal episode. Notable labs Na 114 mEq/L, K 2.2 mEq/L, WBC 23.5K, and Cr 2.91 mg/dL. Stool electrolytes resulted in Stool Osm Gap 48 mOsm/kg consistent with secretory diarrhea. Of note, patient was hospitalized 3 times in the past 2 months for hyponatremia, hypokalemia, and AKI requiring temporary dialysis secondary to profuse diarrhea. A colonoscopy revealed a large rectal polypoid lesion with pathology consistent with a tubulovillous adenoma (**Figure**). She had aggressive electrolyte and fluid repletion with a robot assisted abdominoperineal resection. Subsequently, noted to have resolution of her symptoms and complete electrolyte correction upon follow up (**Table**).

Discussion: Villous adenomas, normally a benign condition, can present with a life-threatening electrolyte derangements and volume depletion which makes the ability to diagnose and adequately treat MWS critical. Patients typically have multiple admissions with watery or mucous diarrhea, nausea, and vomiting. Labs significant for hyponatremia, hypokalemia, AKI, and leukocytosis. The tumors are large and often past the splenic flexure and low in the rectum, therefore flexible sigmoidoscopy can be reliably used rather than colonoscopy, which often delays diagnosis due to patients' inability to prep. Treatment includes aggressive fluid and electrolyte repletion until tumor can be surgically resected. Few case reports suggest using indomethacin or octreotide as a bridge to surgery or as medical management for patients who are not surgical candidates. However, patients who are managed medically have a mortality rate up to ~61-100%. Surgical management to definitively resolve symptoms, although minimally invasive options are being explored. A high index of suspicion and a systematic approach is critical to diagnose and provide life-saving treatment for MWS patients.

Table 1. Electrolytes: Comparison of Initial Admission vs. Post-Surgical Resection

Electrolytes	Initial Admission	Post-surgical Resection
Na	114	137
K+	2.2	4.8
Cl	79	106
Creatinine	2.91	1.06



[1973] **Figure 1.** Large rectal polypoid lesion with pathology consistent with a tubulovillous adenoma.

S1974 Presidential Poster Award

Anorectal Mucosal Melanoma: A Case Series Demonstrating the Importance of Maintaining a High Index of Suspicion for This Deadly Disease

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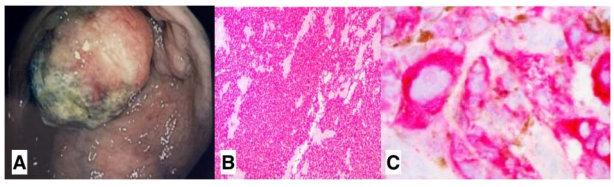
Introduction: Anorectal Mucosal Melanoma (ARM) is a rare and aggressive malignancy that is poorly described and infrequently studied. ARM differs significantly from cutaneous melanoma in presentation, genetic profile, staging, treatment response, and progression patterns. ARM is a challenge for physicians because of its rarity, unclear pathogenesis, non-specific presentation, and aggressive disease course leading to an inferior prognosis. Consequently, it can be misdiagnosed clinically as a benign disease. This report presents 3 clinical cases, all of which presented with relatively benign symptoms, and outlines the extensive evaluation and treatment of these patients.
Case Description/Methods: The first patient is a 73-year-old White male with a past medical history of external hemorrhoids who presented to his primary care provider after developing rectal pain that did not resolve with sitz baths and over the counter topical therapy. Physical exam revealed 3 masses, believed to be hemorrhoids. The masses were then excised and sent for pathology, which revealed ARM. The second patient is a 63-year-old White female with a past medical history of psoriatic arthritis who presented to the hospital with one month of intermittent, painless hematochezia during defecation. Physical exam findings were remarkable for a large anterior anal mass on digital rectal examination. Colonoscopy revealed a 2 cm submucosal, actively bleeding, friable, non-pigmented mass on a broad stalk in the anal canal that extended to the dentate line [**Figure A**]. Colorectal surgery performed a full-thickness trans-anal resection of the mass. Immunohistochemical studies were positive for SOX-10 and Melan-A [**Figures** B, C], confirming ARM. The third patient is a 71-year-old African American male with a past medical history of cerebrovascular accident with residual ataxia who presented to his gastroenterologist with worsening painless hematochezia. The patient describes taking aspirin and clopidogrel secondary to recent cerebrovascular accident. Since initiation of these medications, the patient has noticed hematochezia 3 to 4 times a week. The patient underwent colonoscopy, which revealed a 14 mm oozing, polypoid, semi-pedunculated lesion in the distal rectum.
Discussion: Increased awareness of ARM with an increased index of suspicion and a low biopsy threshold is needed to make an early diagnosis. Approaching lesions in this fashion may improve outcomes by helping to mitigate the high burden of late diagnoses and advanced disease.



[1974] **Figure 1.** A) Image obtained during colonoscopy showing 1x2 cm, submucosal, bleeding, friable, benign appearing, fibrovascular mass in the anal canal, extending distal to the dentate line. B) Tumor biopsy demonstrating positive to immunohistochemical stain for SOX-10, a common marker for malignant melanoma. C) Tumor biopsy with immunohistochemical stain for Melan-A positivity.

S1975

Chicken Ticca: Hard Object, Wrong Hole

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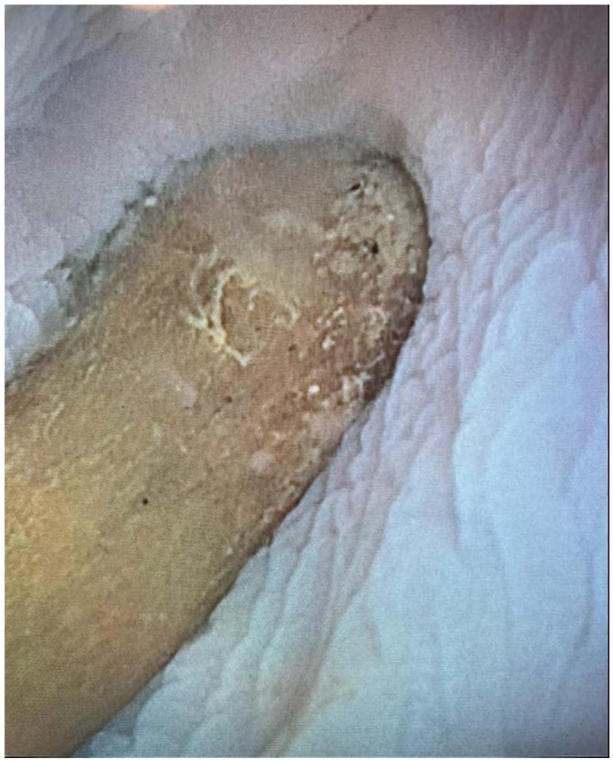
Introduction: Diverticular disease is a common, largely age dependent condition that occurs due to herniation of the mucosa and submucosa through the muscularis propria often at levels of vasa recta penetration. This condition is typically asymptomatic with approximately 4% of patients developing diverticulitis. Fewer than 20% may exhibit symptoms of rectal bleeding, abdominal pain, abscess, perforation or peritonitis. Risk factors include obesity, smoking, and low-fiber diet. Rarely, diverticulitis is caused by ingestion of foreign body (IFB). Unlike typical scenarios of diverticulitis, endoluminal examination and intervention in cases of IFB may be paramount.
Case Description/Methods: The patient is a 58 year old female presenting with left lower quadrant abdominal pain as well as vomiting, diarrhea and fever for one day. Upon presentation, the patient had a leukocytosis (WBC 20.3) with associated tenderness. A Computed Tomography (CT) scan revealed pericolonic inflammatory changes of the sigmoid colon including a tubular 50 x 3mm structure suspicious for a foreign body (**Figure**). Given the clinical picture, Piperacillin/Tazobactam was initiated and a sigmoidoscopy was performed. Upon endoscopy, a chicken wing bone was visualized within a diverticulum and removed successfully utilizing a 10mm snare. The patient's WBC normalized and her symptoms improved. Subsequently, she tolerated a diet and was discharged on Ciprofloxacin/Metronidazole for 1-week course.
Discussion: Diverticulitis unrelated to IFB has been theorized to occur either due to overgrowth of intestinal flora within a diverticulum or due to localized immune dysregulation. IFB mostly occurs in the elderly, those with psychiatric disorder as well as those with alcohol abuse. Most causative foods (chicken bones, fish bones, etc.) pass without issue. That said there are cases of complications such as colonic perforation, diverticulitis as well as abscesses occurring due to IFB. Utilization of cross-sectional imaging offers diagnostic utility for the radiopaque IFB. The findings of diverticulitis plus a foreign body should be of concern as complications may occur. Typically, in cases of acute diverticulitis, endoscopy is not performed due to operative risk in the setting of active inflammation. In this scenario, early endoluminal intervention and successful foreign object extraction was key to the patients positive clinical outcome and likely prevented further potential complications.



[1975] **Figure 1.** Chicken Bone Within a Diverticulum.

S1976

A Colon Mass: Don't Always Believe What You See

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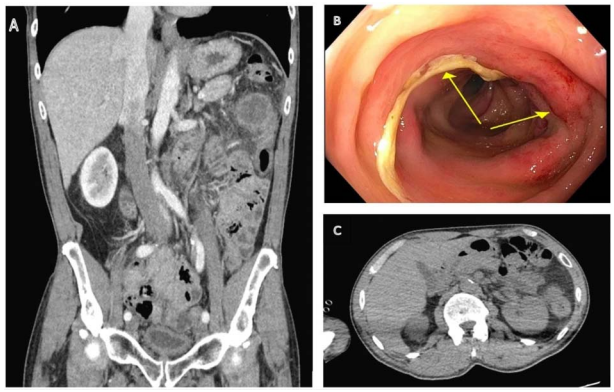
Introduction: Diverticulitis occurs when there is inflammation and microperforation to the outpouching of colonic mucosa and submucosa. One of the most common complications of diverticulitis is an abscess. Computed Tomography of the abdomen and pelvis is the imaging of choice to diagnose diverticulitis and its complications. Statistically the sensitivity, specificity, positive and negative predictive values are greater than 95%. However, in certain situations CT with a complex clinical history can skew one's perception in diagnosing that could potentially lead to a delay in treatment. We present a case of a diverticular abscess masked as a colonic mass.
Case Description/Methods: 58-year-old Black man with hypertension and tobacco use presented to the emergency department with 3 weeks of abdominal pain, bloating, constipation and a 12-pound weight loss. A colonoscopy 3 months' prior had shown a 10 mm cecal polyp, ascending and sigmoid colon diverticulosis. Initial labs were significant for a hemoglobin of 11.2 g/dL and hematocrit of 33.2%. CT abdomen and pelvis (**Figure A**) showed a 4.9 x 3.9 cm peripherally enhancing hypodense exophytic mass at the splenic flexure concerning for colon malignancy. A colonoscopy was pursued revealing narrowed and congested erythematous mucosa in the sigmoid colon near a diverticulum with spontaneous drainage of pus (**Figure B**). Sigmoid biopsies showed focal cryptitis. Patient was started on antibiotics and 2 days after a repeat CT of the abdomen demonstrated interval resolution of the collection with residual inflammation (**Figure C**). Patient was discharged with 10 days of antibiotics and was later seen by his primary care physician for a follow up where he admitted to resolution of his symptoms.
Discussion: In this case a diverticular abscess was initially thought to be a colon mass delaying appropriate treatment with antibiotics and possibly drainage, highlighting the importance of keeping a broad differential even in those with imaging and symptoms suggestive of malignancy. Complicated diverticulitis with abscess formation occurs in 16-40% of patients who present with sigmoid diverticulitis but in

some rare cases abscess formation has also been associated with colon cancer in up to 0.3 to 4% of patients that can lead to even more diagnostic challenges. In these situations, reviewing the imaging with your Radiologist might be helpful to further strengthen your diagnosis and to possibly avoid a colonoscopy that can have an increased risk of perforation in acute diverticulitis.



[1976] **Figure 1.** A) Coronal view of splenic flexure exophytic mass B) Sigmoid area with congestion, erythema and drainage of pus C) Transverse view of residual splenic flexure mass.

S1977

A Turn for the Worse in the Transverse

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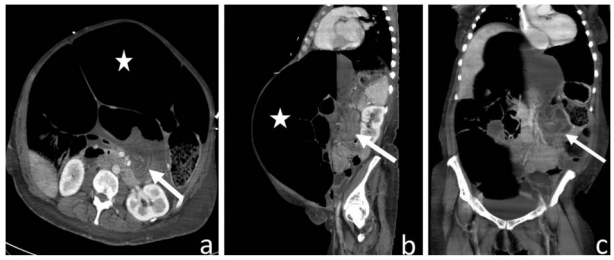
Introduction: Transverse colon volvulus (TCV) is a rare cause of bowel obstruction. Normally, the transverse colon is fixed but can be altered due to abdominal surgery, adhesions, chronic constipation, distal colonic obstruction and *Clostridium difficile* infection (CDI). When the transverse colon twists around the mesenteric axis, blood flow decreases and can potentiate ischemia. Patients may present with non-specific pain and progress to nausea, vomiting, abdominal distention, abdominal pain with/without rebound tenderness, and decreased bowel sounds. We describe a TCV case below.
Case Description/Methods: A 44-year-old female with PMHx of anoxic brain injury, epilepsy, hypertension, constipation, recurrent Ogilvie's syndrome, and CDI presented to the ER with worsening abdominal distention, pain, and inability to move her bowels despite straining. Her vital signs were normal apart from a blood pressure of 166/113 mmHg. There were no significant laboratory abnormalities. Exam revealed a soft, markedly distended abdomen with reduced bowel sounds. Abdominal computerized tomography (CT) showed transverse mesocolon twisting with "swirl sign" and colonic dilatation from the transverse colon to cecum concerning for TCV (**Figure**). No evidence of bowel ischemia or pneumoperitoneum was seen. Gastroenterology performed a colonoscopy revealing a spiral twist of converging mucosa in the transverse colon; detorsion was successful and a decompression tube was placed. Abdominal distension immediately improved. Surgery referral was recommended, but family chose conservative care. The patient was placed on a 3-laxative regimen. Since discharge, no subsequent hospitalizations have occurred to date.
Discussion: TCV is a rare form of colonic volvulus. Colonic and mesenteric elongation due to chronic constipation can contribute to TCV development, as well as abdominal surgery and CDI causing colonic mucosal inflammation. CT is very useful in TCV diagnosis by detecting the "swirl sign". It is specific to represent bowel twisted around a mesentery focal point. CT also assesses for complications, such as bowel ischemia and perforation. TCV is an emergency and recognition delays can lead to bowel ischemia, perforation, and death. TCV patients without bowel compromise may have endoscopic detorsion emergently done which maintains colonic blood supply. This can be followed by non-emergent surgery which is ultimately the definitive treatment of TCV. Our case demonstrates successful management of acute TCV.



[1977] **Figure 1.** Contrast enhanced CT of the abdomen and pelvis [axial (a); sagittal (b); coronal (c)] demonstrated twist in the transverse colon mesentery, "swirl sign", consistent with transverse colon volvulus (white arrows) with upstream gaseous distension of the transverse colon (stars).

S1978

A Rare Case of Leflunomide-Induced Colitis: Clinical, Endoscopic and Microscopic Findings

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Introduction: Leflunomide-induced colitis is a rare entity, which can be difficult to diagnose. We present a case of an elderly woman with rheumatoid arthritis (RA) who complained of subacute diarrhea. Colonoscopy with biopsy was performed and investigation of inflammatory and infectious causes were negative. Cessation of leflunomide resolved diarrhea. A wide range of endoscopic findings and late-onset of symptoms makes this a challenging diagnosis. Our hope is to aid in the recognition of this drug-induced colitis to reduce hospitalization stays and improve treatment.
Case Description/Methods: A 79-year-old female with a past medical history of RA, COPD and gout, presented to the hospital with 7 days of watery diarrhea. She reported more than 6 bowel movements daily. She denied recent sick contacts, travel, or changes in diet. Patient did not have a family history of inflammatory bowel disease or colorectal cancer. Vitals were stable. CT abdomen/pelvis demonstrated continuous wall thickening of the splenic flexure to rectum. Labs included CRP at 40.7, ESR at 58, and a positive fecal lactoferrin. Patient was empirically treated for infectious colitis with ceftriaxone and metronidazole. Stool cultures and C. difficile toxin were negative. Colonoscopy showed areas of congested and erythematous mucosa from the rectum to the transverse colon. Biopsies demonstrated increased lymphocytic infiltration of the lamina propria, thickened epithelial layer and crypts with increased intraepithelial lymphocytes. Upon further questioning, the patient reported starting leflunomide 2 months prior. She was asked to trial cessation of leflunomide upon discharge. Upon 2 week follow up, diarrhea had resolved.
Discussion: Leflunomide is a disease modifying drug used to treat RA among other types of inflammatory arthritis. In approximately 20% of patients, adverse gastrointestinal side effects of abdominal pain, diarrhea and nausea are well recognized. However, drug-induced colitis has only been described in a few case reports, and even fewer endoscopic descriptions exist. Paucity of this diagnosis may be attributed to its nebulous presentation. Unlike most typical drug reactions, symptom onset can range from 18-24 months. As our case exemplifies, this can lead to unnecessary testing and prolonged hospital stays. Due to this patient's symptom improvement with supportive care, we opted for drug cessation. However, for severe colitis, steroids, cholestyramine wash, and biologics may be considered.

S1979

De Novo Association Between Gastrin and CEA in Colorectal Cancer

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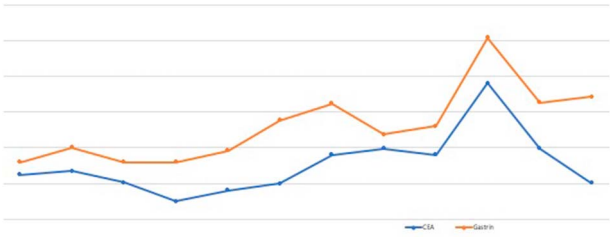
Introduction: Colorectal cancer (CRC) is the third leading cause of mortality in the United States. CEA and CA-19 remain the 2 most common prognostic markers for cancer surveillance. However, gastrin, a peptide hormone, may have some diagnostic benefits as well. Our case report uniquely demonstrates a positive and parallel correlation between gastrin and CEA levels in a patient diagnosed with Stage 3A colon adenocarcinoma status post sigmoidectomy and 5-FU therapy.
Case Description/Methods: We present an 84-year-old female with a past medical history of Stage 3A colon adenocarcinoma status post sigmoidectomy and 5-FU therapy, Hashimoto's thyroiditis, hypertension and paroxysmal atrial fibrillation on Eliquis who reported chronic diarrhea ongoing for the past 7 years that she noticed worsening after the sigmoidectomy. Additionally, she reported no family history of any gastrointestinal malignancies. Initial CEA was 4.2, Hg was stable at 12.5 and no other lab abnormalities were noted (**Figure**). Surveillance CT colonography, abdominal MRI and Dotatate scan demonstrated no evidence of any neuroendocrine tumor or mass. An extensive workup was unable to delineate any infectious or inflammatory etiology. 5-HIAA and paraneoplastic testing were negative. EGD revealed mucosal hyperplasia with concern for atrophic gastritis and a stomach pH of 8. With no history of PPI consumption and an initial gastrin level of 2242 pg/mL, Zollinger Ellinson syndrome was also subsequently excluded. Colonoscopy was unremarkable with no evidence of microscopic colitis or inflammatory bowel disease. Given initial elevation of serum gastrin, serial gastrin levels were obtained and were found to be closely correlated to the patient's elevated CEA levels.
Discussion: Our case report reveals that the gastrin and CEA lab values positively correlate with each other in a patient with underlying colon adenocarcinoma. Further studies to examine the significance and potential use of gastrin as a marker for diagnosing or determining prognosis in colorectal cancer is imperative.



[1979] **Figure 1.** Serial Gastrin and CEA levels.

S1980

Cocaine-Induced Pseudomembranous Colitis With Negative *Clostridium difficile* Infection

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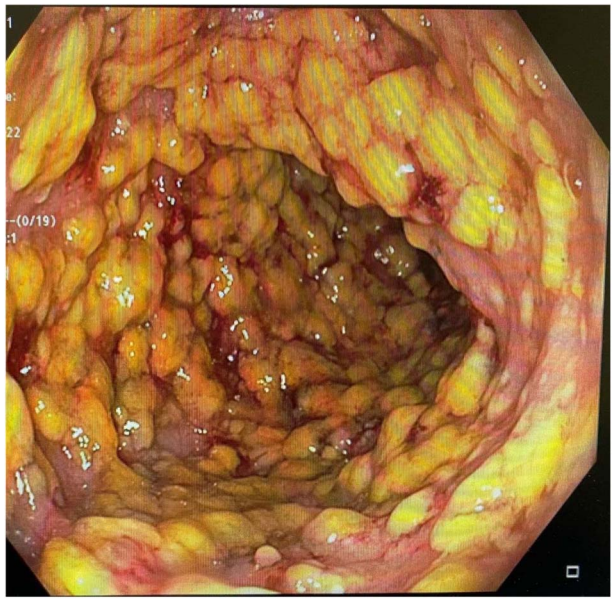
Introduction: Pseudomembranous colitis (PMC) is most commonly caused by Clostridium difficile (C.Diff). The incidence of C.Diff related PMC is 3-8% and increasing. Other than *Clostridium difficile*, ischemia, infections, medications, and inflammatory conditions can cause PMC. We report a case of pseudomembranous colitis-tested negative PCR for *C. difficile*.
Case Description/Methods: A 52-year-old female with a past medical history of hypothyroidism, asthma, and polysubstance abuse (history of chronic heroin, cocaine, benzodiazepine, alcohol, and cigarette use) with Hx of chronic intermittent diarrhea due to opioid withdrawal presented to the emergency department with bloody watery diarrhea of 3-4 times in a day for 5 days. On initial evaluation, the patient's vital signs are stable. The abdomen is diffusely tender on physical examination with increased tenderness in the left lower quadrant. Labs showed WBC count of 15,900/μL, 90.2% neutrophils, AST of 80 U/L, ALT of 41 U/L, ALP of 97 U/L, total bilirubin of 0.5 mg/dL, lactic acid of 0.9 mmol/L and c-reactive protein of 11.9 mg/dL. The urine drug screen was positive for benzodiazepine, cocaine, opiate, and methadone. CT scan of the abdomen showed mild diffuse concentric colonic wall thickening representing colitis. The patient was empirically treated with IV ceftriaxone, IV metronidazole, and PO vancomycin. Stool for *C. difficile* PCR was negative 3 times on 3 different days. Stool culture was negative for *Salmonella*, *Shigella*, *Campylobacter*, or *E. coli* O157:H7. Fecal lactoferrin quantification was 320.72 μg/mL. The patient underwent sigmoidoscopy, which showed discontinuous areas of ulcerated mucosa covered with yellowish punctate membrane with stigmata of recent bleeding in the entire examined colon. Biopsy of the colon showed focal active colitis with superficial crypt erosion and focal adherent mucopurulent material negative for crypt abscesses and granulomas, consistent with pseudomembranous colitis. The patient was continually treated with supportive care including IV fluids and bowel rest. Her diet was advanced, and her diarrhea improved (**Figure**).
Discussion: Other than *C. difficile*, we propose keeping other differentials of pseudomembranous colitis is essential. Other infections from *S. aureus*, *E. coli*, *Shigella* and *Strongyloides* may also cause PMC. Non-infectious causes of PMC include chemical endoscope cleaning agents, intestinal ischemia, drug abuse from cocaine, inflammatory bowel disease, and microscopic colitis to avoid over-usage of antibiotics and focus on targeted therapy.



[1980] **Figure 1.** Discontinuous areas of ulcerated mucosa covered with yellowish punctate membrane with stigmata of recent bleeding in the entire examined colon.

S1981

Adult Intussusception: Finding a Lead on a Rare Case

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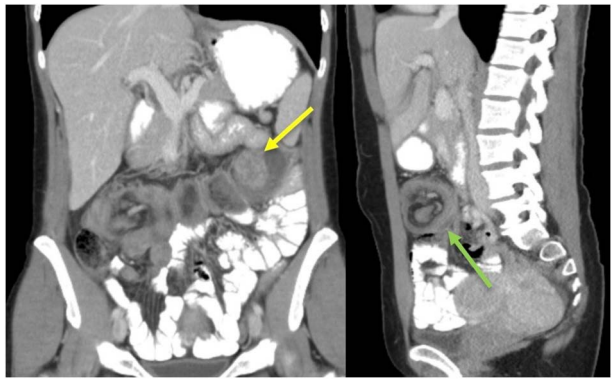
Introduction: Bowel intussusception is defined as a telescoping proximal loop within the distal loop of bowel, obliterating the bowel lumen. Although over 95% of cases occur in the pediatric population; intussusception in adults is strongly associated with tumors, with malignancy rates accounting for approximately half of all adult cases.
Case Description/Methods: A 37-year-old female with no known past medical history presented to the Emergency Department complaining of suddenly worsening non-localized abdominal pain and distension. She reports a 5-day history of intermittent generalized cramps abdominal pain, which causes her to wake up several times throughout the night. Associated symptoms include anorexia, non-bloody emesis, and constipation, followed by small volume loose stools. Her physical exam was significant for generalized abdominal tenderness. Initial laboratory work-up with CBC, CMP, lipase and CRP were unrevealing except for a low serum bicarbonate (19). CT abdomen with contrast demonstrated a large colonic intussusception from the ascending colon to the splenic flexure, with suggestion of a large polyp or mass in the splenic flexure as a possible lead point **(Figure)**. The patient underwent an exploratory laparotomy with right hemicolectomy and lymphadenectomy. Pathology of the resected colon was consistent with a Plasmablastic neoplasm involving the ileocecal valve. All surgical margins and 27 resected lymph nodes were negative.
Discussion: Adult intussusception is a rare cause of bowel obstruction (< 1% on adult causes) that carries a high risk of complications, if not emergently identified and treated. Nonspecific abdominal pain is the most common clinical presentation of Adult Intussusception. The triad of red current jelly stool, colicky abdominal pain, and a palpable sausage-shaped mass; classically seen with children, is rarely present in the adult presentation. Due to high rates of malignancy, adult cases are traditionally treated with a large en-bloc resection. Early diagnosis of intussusception in adults requires a high level of clinical suspicion. Failing to recognize this may lead to complications such as bowel ischemia and perforation. Treatment in adults requires urgent operative management with oncologic resection and further investigation.



[1981] **Figure 1.** Left: Coronal CT revealing large colonic intussusception with lead point (yellow arrow). Right: Sagittal CT demonstrating target sign (green arrow).

S1982

To Treat or Not to Treat: A Case of Intestinal Spirochetosis

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Introduction: Intestinal spirochetosis, first described in 1967, is an uncommon disease defined by colonization of the colonic epithelial cell with anaerobic spirochetes of the Brachyspiraceae family. Histologically, it is characterized by a distinctive fringe-like, end on end attachment of a densely packed filamentous spirochetes on the surface of the epithelium of the colon. Its prevalence varies depending on geographic location, but ranges between 2%-7% in Western countries. Higher prevalence has been noted in homosexual men and HIV-positive patients. Patient may present asymptomatically or with associated symptoms. Most cases are found incidentally during screening or surveillance colonoscopy. Here we present a patient with evidence of spirochetosis after a screening colonoscopy.

Case Description/Methods: A 71-year-old man with history of prostate adenocarcinoma and squamous cell carcinoma of lung s/p lobectomy in 2020 on home oxygen who was consulted to gastroenterology services for screening colonoscopy. Last colonoscopy on 2010 revealed severe diverticulosis, hemorrhoids and no evidence of masses or polyps. He denied episodes of rectal bleeding, stool changes or unintentional weight loss. Patient underwent colonoscopy with evidence of 2 diminutive sessile polyp at transverse colon and pandiverticulosis. Pathology showed finding remarkable for tubular adenoma and fragment of colonic mucosa with a blue fringe over the surface epithelium suggestive of spirochetosis. Due to finding, infectious diseases services were consulted and stated that the found organism was most likely to be Brachyspira aalborgi or pilosicoli. Since he was asymptomatic and immunocompetent, with negative HIV test, recommendations were to not start antibiotic therapy and to be monitored clinically. Since he continued clinically stable without symptoms there was no need for starting therapy.
Discussion: Intestinal spirochetosis is a disease mostly found accidentally during surveillance and screening colonoscopy when biopsies are taken from polyps or diverticula. Generally, infection is non-invasive, but rarely invasion occurs causing diarrhea, abdominal pain or bleeding. There are reports of more severe disease and increasing incidence in the homosexuals and HIV positive population. When symptomatic, treatment consists of metronidazole. The importance of this case is to make the practicing physician aware of this rare disease, its clinical presentation, management and the growing in incidence in the aforementioned population.

S1983

Atypical Presentation of Chronic Schistosomiasis as a Large Obstructing Rectal Mass

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Introduction: Schistosomiasis is a common parasitic illness affecting over 200 million people worldwide with a higher prevalence in Sub-Saharan Africa, South America, and Eastern Asia [1]. The parasite is carried by freshwater snails, which are not native to the United States, and transmit infection via contaminated water. Acute intestinal infection with schistosomiasis can lead to intestinal mucosal hyperemia, edema, and ulceration with clinical manifestations of fevers, diarrhea, and abdominal pain [2,3]. Migration and entrapment of Schistosoma eggs can give way to chronic infections involving the gastrointestinal tract leading to intestinal polyps or colorectal adenocarcinoma [3].
Case Description/Methods: We present a case of chronic intestinal Schistosomiasis in an 86-year-old Asian-American male, who presented to the hospital with a low volume, slow rate, lower gastrointestinal bleed. CT abdomen and pelvis with contrast revealed diffuse circumferential hyperemia of the rectosigmoid colon without distinct masses. Colonoscopy revealed a near-complete obstructing ulcerated rectal mass, 2cm from the anal verge, which was unable to be safely traversed with the colonoscope. A pelvic MRI with contrast showed a large multilobulated heterogeneous mass centered within the rectum extending into the perirectal tissues and prostate measuring 8.2 x 0.5 x 10 cm. Rectal mass biopsies revealed benign colonic mucosa with ulceration and focal calcified Schistosoma organisms, without the presence of dysplasia or carcinoma. This patient subsequently elected for a proximal diverting loop sigmoid colostomy with palliative intent.
Discussion: The typical clinical presentation of patients with a chronic gastrointestinal Schistosomal infection is benign rectal polyps, typically appearing as Paris Type IIa [3]. Our literature review revealed no previously documented intestinal polyps to be larger than 2cm. Chronic intestinal schistosomiasis is also associated with adenocarcinoma of the colon and prior infection increases the risk by as much as 3 times compared to those without previous infection [5]. This patient's presentation was inconsistent with the typical features of chronic infection. Schistosomiasis needs to be kept on the differential for specific patient populations presenting with hematochezia as the early diagnosis and treatment can prevent late and more severe clinical complications as seen in this patient.

S1984

Biopsy Proven Typical Hemolytic Uremic Syndrome (HUS): A Rare Complication of *Clostridioides difficile* Infection in Adults

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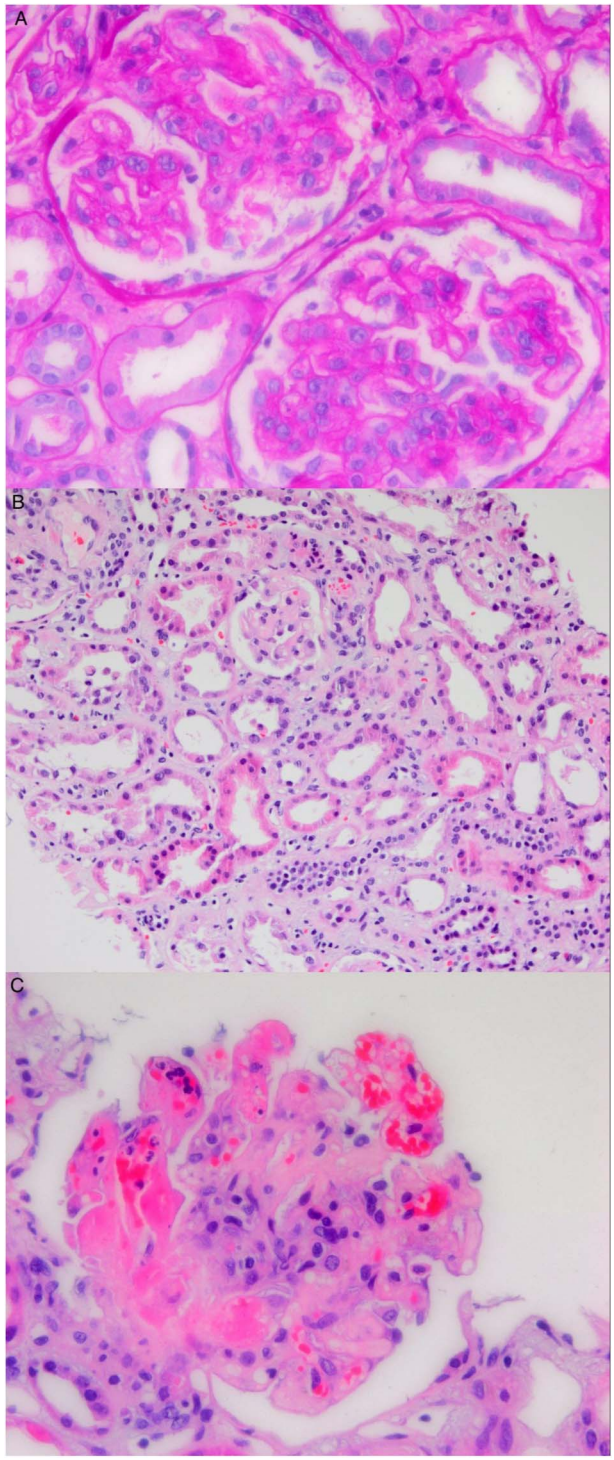
Introduction: Hemolytic uremic syndrome (HUS) is clinically diagnosed from the triad of microangiopathic hemolytic anemia, thrombocytopenia, and renal injury. So-called "typical" (Shiga toxin or ST-HUS) is most often caused by Shiga toxin producing E. coli O157:H7 infection. Alternatively, "atypical" or complement-mediated HUS (CM-HUS) has a genetic component and is caused by uncontrolled complement activation triggered by a variety of etiologies. *Clostridioides difficile* is a Gram-positive spore forming bacteria that is transmissible through a fecal-oral route that present with colitis. HUS as a complication of CDI is rare, with only 11 cases reported in adults.
Case Description/Methods: A 43-year-old female with a past medical history of hepatic encephalopathy, peptic ulcer disease was found unconscious with a 3-day history of diarrhea, diaphoresis, and chills. Initial blood pressure was 186/97 mmHg and pulse of 110. Lactate dehydrogenase was 1223 U/L, creatinine 6.5 mg/dL, haptoglobin $<$ 10 mg/dL, platelets 98 K/uL, and had schistocytes on peripheral blood smear. Concern was for thrombotic thrombocytopenia purpura (TTP). However, after patient's ADAMTS13 protease level came back normal and inhibitor level undetectable, the leading diagnosis became HUS. Renal biopsy showed thrombotic microangiopathy without fibrosis. Stool pathogen panel was only positive for *C. difficile* After complement and genetic susceptibility panel labs returned negative for complement-mediated HUS, the leading diagnosis was typical HUS. The patient was started on oral vancomycin, plasmapheresis and hemodialysis with dramatic improvement after only a few sessions of plasmapheresis and doses of vancomycin. Eventually hemodialysis was stopped.
Discussion: Our patient presented with the classic triad of HUS with a renal biopsy showing thrombotic microangiopathy, confirming the diagnosis of HUS (**Figure** 1). The patient was found to have a negative Shiga toxin assay which would suggest an atypical cause of HUS, especially in an adult population. However, the patient had normal advanced complement studies and genetic studies which ruled out CM-HUS. This makes our patient's presentation unique as she presented with typical HUS as an adult that was caused by an organism not commonly associated with HUS. In addition, our case was the only one to confirm the diagnosis of HUS by renal biopsy with further classification of "typical" HUS with negative advanced complement and genetic studies.



[1984] **Figure 1.** Image 1: Renal Biopsy showing TMA: (A) mesangiolysis and endothelial cell swelling. (B) acute tubular injury, with tubular thinning and reactive nuclear changes. Interstitial edema and mixed interstitial inflammation. (C) fibrin thrombi and neutrophils within the capillary loops. RBC fragmentation is evident here within capillary loops and the mesangium.

S1985

Appendicitis Due to Pneumo-Appendix: A Rare Complication of Colonoscopy

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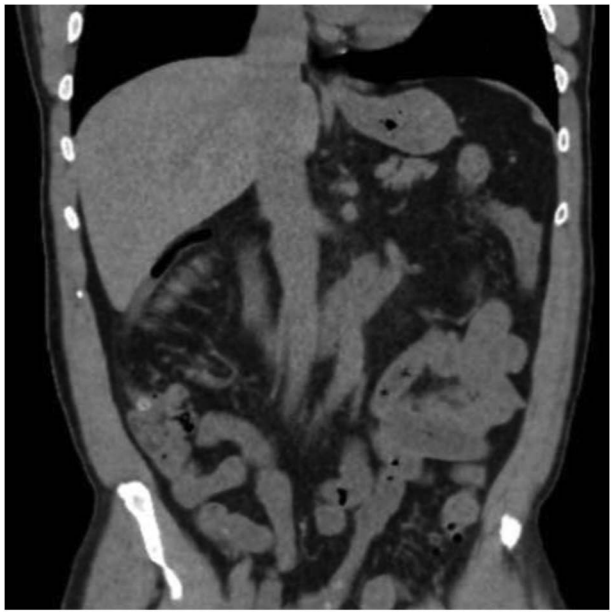
Introduction: Colonoscopy is generally regarded as a safe procedure however there are few rare complications that clinicians should be aware of. Here we present a case of pneumo-appendix causing appendicitis after colonoscopy.

Case Description/Methods: A 62-year-old male presented to hospital with right lower quadrant abdominal pain that started twelve hours after outpatient screening colonoscopy. Patient was asymptomatic prior to the procedure. During colonoscopy, bowel prep was noted to be excellent, cecum was reached and appendicial orifice was visualized which didn't show any signs of inflammation. No polypectomy or any other intervention was performed. On admission vital signs were stable. Rebound tenderness to palpation at McBurney's point was noted. WBC count was 13x10^3/uL, lipase level of 126unit/L and normal CMP. CT scan of abdomen showed proximally dilated appendix measuring up to 1.3cm with thickened walls, air in the distal tip, mild fat stranding but no appendicolith was identified nor was any intestinal perforation reported (**Figure**). General surgery was consulted and patient underwent appendectomy. No fecal material was found within appendiceal lumen. Histological examination revealed marked neutrophilic infiltration and confirmed acute appendicitis.

Discussion: Up to one-third of the patients experience pain, bloating and nausea after colonoscopy which is mostly due to air insufflation during the procedure or colonic spasm, and can last for few hours to several days. Pain can also occur after removal of the polyp or if biopsy is taken during the procedure. Although rare, bleeding (0.21%) and perforation (0.1%) are by far the most common complications of colonoscopy. Appendicitis after colonoscopy is an extremely rare complication with an incidence rate of 0.038%. If there is onset of abdominal pain after polypectomy, clinicians are usually concerned about intestinal perforation which should be ruled out by contrast imaging studies. Possible mechanisms of appendicitis after colonoscopy include introduction of fecal content into appendix causing obstruction and later inflammation, barotrauma from over-inflation or direct trauma to appendix lumen. In this case, surprisingly there were no other cause but pneumo-appendix contributing to appendicitis as seen on imaging studies. Clinicians should be aware of this rare complication while evaluating a patient with post-colonoscopy abdominal pain so that it is promptly recognized and early intervention can prevent devastating results.



[1985] **Figure 1.** Pneumo-appendix and fat stranding.

S1986

Atypical Presentation of Metastatic Prostatic Adenocarcinoma as Large Bowel Obstruction

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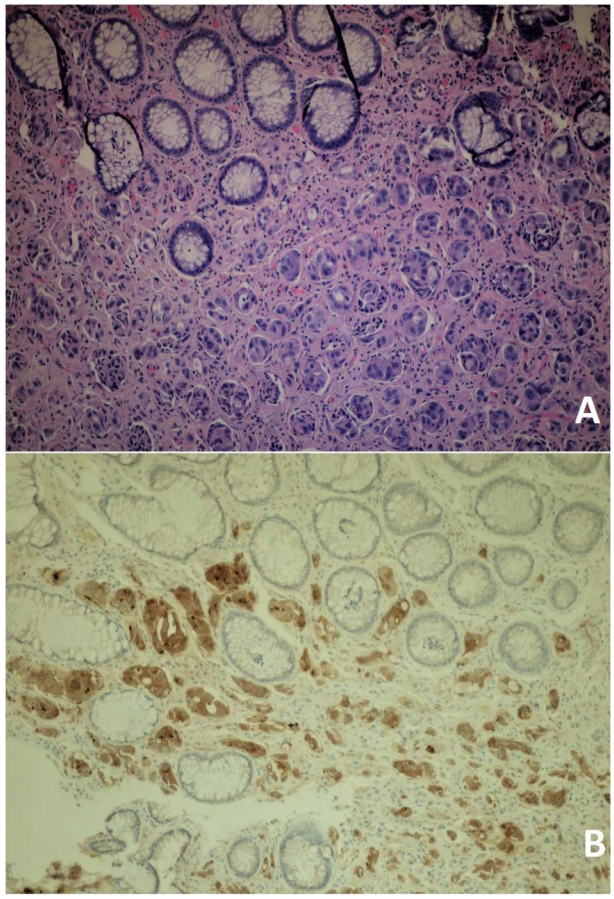
Introduction: In the United States, prostate cancer is the second most common cancer in men, following lung cancer. Patients with prostate cancer are usually asymptomatic or have nonspecific urinary symptoms. Metastatic disease involving the rectum has been scarcely reported in the literature and occurs in 1.5-11% of patients with prostate cancer. It is even more rare to have a malignant large bowel obstruction due to rectal metastasis from prostate cancer, as most cases are usually from colorectal cancer (60%), pancreatic cancer, ovarian cancer, and lymphoma (10%). We herein present a unique case of large bowel obstruction that was eventually found to be secondary to undiagnosed prostate cancer.

Case Description/Methods: Our patient was a 77-year-old male who presented with worsening recurrent abdominal distention and constipation for more than 10 days. CT abdomen on admission revealed distended small and large bowel with no focal transition point, which likely represented ileus. There was no lymphadenopathy reported. However, given that patient's symptoms remained unresolved with conservative medical management, a rectal exam under anesthesia along with anal dilation and rectal biopsy was performed by general surgery and showed a rectal stricture. Subsequent flexible sigmoidoscopy with GI showed diffuse area of severely congested, friable, and ulcerated mucosa in mid-rectum and distal-rectum. Partial large bowel obstruction was managed surgically with diverting colostomy. Pathology of the rectal biopsy showed metastatic prostatic adenocarcinoma, possibly with focal neuroendocrine differentiation. Patient was evaluated by urology who recommended outpatient follow-up for a possible transrectal prostatic ultrasound with biopsy to Gleason score to help guide treatment. Oncology suggested that the patient would benefit from hormonal therapy. Patient was planned to start on hormone therapy and chemotherapy as part of the long-term management plan (**Figure**).

Discussion: Prostatic adenocarcinoma is a slow-growing neoplasm that is often difficult to diagnose until it has metastasized. The diagnosis becomes even more challenging when it uncommonly presents as LBO from rectal metastasis. Our case emphasizes the importance of considering GI symptoms as part of the symptomatology. Although rare, prostate cancer metastasis should be considered in the differential for carcinomas seen in the rectal wall in men with PSA staining as a sensitive marker for prostatic differentiation that should be used in indeterminate cases.



[1986] **Figure 1. A:** Neoplastic glands seen in submucosal layer of rectal biopsy **B:** Positive prostate-specific antigen (PSA) immunostain in infiltrating glands while colorectal mucosa is negative.

S1987

Cap Polyposis: A Rare Condition in a Pediatric Patient Successfully Treated With Endoscopic Treatment

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Introduction: Cap polyposis is a rare condition of the rectum or sigmoid colon manifested by inflammatory polyps covered by a thick layer of fibrinopurulent mucus. This condition typically presents as mucoid diarrhea and rectal bleeding, and patients are often prescribed antibiotics (such as those for *Helicobacter pylori*), steroids, infliximab, or aminosalicylates. Surgical management is an option for unresponsive disease, but endoscopic management has been rarely reported.
Case Description/Methods: A 16-year-old boy had a 10-year history of mucoid diarrhea and occasional rectal bleeding and incontinence. Previous endoscopy revealed pseudopolyps in the rectum that appeared inflammatory with granulation tissue. Initial laboratory evaluation revealed mild iron deficiency, anemia, and hypoalbuminemia. The patient was treated with limited polypectomy, topical steroids, and diphenoxylate-atropine, which did not resolve his symptoms. A full workup for inflammatory bowel disease with an upper endoscopy, colonoscopy, and magnetic resonance enterography showed indications of marked polyposis in the rectum that was suggestive of "cap polyposis". Tests for *H. pylori* were negative. There was no improvement with metronidazole or with treatments to reduce straining during bowel movements. Repeat sigmoidoscopy showed diffuse 1–4-cm multilobulated polypoid lesions in the rectum. Initially ESD was considered but deemed unsuitable due to poor lifting of the lesions. Thus, wide field endoscopic mucosal resection (WEMR) was performed, Approximately 40 band ligations with snare endoscopic submucosal resection were performed with near complete removal of all of the lesions. There was no post-procedure bleeding, pain, or other adverse effects. The resected tissue specimen had signs of high-grade dysplasia away from the resection margins. The patient's symptoms resolved, and a second-look procedure 3.5 months later revealed only a slightly nodular area with no signs of dysplasia or cap polyposis.
Discussion: Patients with cap polyposis typically report mucoid stools and rectal bleeding, and evaluations reveal a characteristic pattern on colonoscopy and pathology. For cases of cap polyposis in which conservative medical management fails, wide-field endoscopic mucosal resection is a viable option.

S1988

Breast Cancer With Metastasis to Colon: A Case Report

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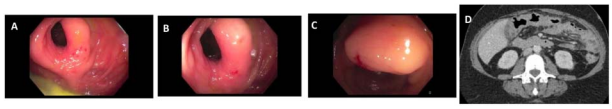
Introduction: The most common sites of metastases in breast cancer include bone, liver and lung. Gastrointestinal tract is a less common site for metastases in breast cancer. A PubMed literature review from 2015 to 2020 revealed only 32 cases of gastrointestinal metastases of breast cancer origin (1). Metastasis to the colon was seen in 28% of these cases with an average interval time to diagnosis of 9.43 years. In the case below, we present an uncommon case of a patient complaining of diarrhea and found to have ER+, HER2- metastases to ascending colon.
Case Description/Methods: Patient is a 56-year-old woman with history of ER+, HER2- invasive lobular carcinoma of the left breast diagnosed in 2009 and peritoneal carcinomatosis since 2017, who underwent diagnostic colonoscopy for chronic diarrhea. The computed tomography (CT) scan of the abdomen showed an area of thickening near the ileocecal junction measuring 6.5 cm, concerning for possible intraluminal mass. Colonoscopy showed mild stenosis in the proximal and distal ascending colon. Biopsies from the ascending colon were positive for ER+, HER2- metastatic carcinoma. This prompted a change in her chemotherapy regimen to Eribulin, designed to target metastatic breast cancer. After altering her chemotherapy regimen, CT imaging showed improvement in the thickening of ascending colon **(Figure)**
Discussion: Metastatic breast cancer involving the gastrointestinal tract is uncommon and is often underestimated. Metastases to the stomach and small bowel are more frequent than colonic involvement. Lobular type of breast carcinoma is the most common histological type that metastasizes to the colon. Previous studies have suggested that the presence of hormone receptors may facilitate gastrointestinal

spread. The use of immunohistochemistry staining was vital in differentiating metastatic disease from a primary colonic cancer. For a correct diagnosis, deep biopsy should be performed as endoscopic diagnosis of metastatic breast cancer can be difficult when the biopsy samples are too superficial. A better knowledge of gastrointestinal metastases from primary breast carcinoma is warranted because appropriate management may result in longer survival.



[1988] **Figure 1.** Image A and B demonstrate the mild stenosis in the splenic flexure from edema seen on colonoscopy. Image C demonstrates edema and nodularity of mucosa in the ascending colon. Image D: CT prior to colonoscopy with circumferential nodular colonic mural thickening noted at and above the level of the ileocecal junction measuring up to 6.5 cm.

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S1989

Case of Metastatic Breast Cancer Resembling Hyperplastic Polyps

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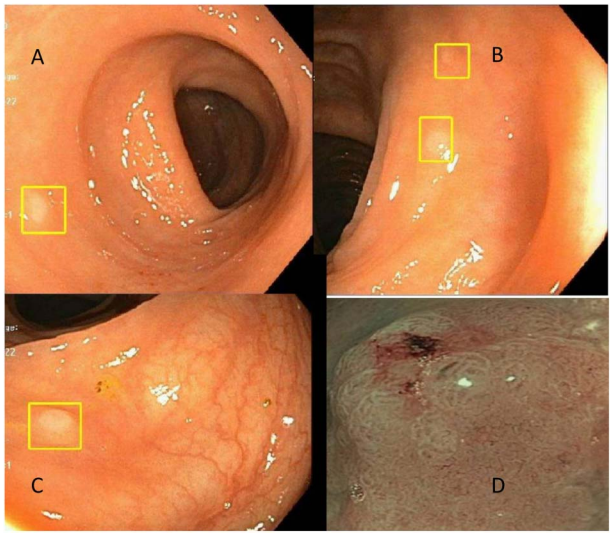
Introduction: Breast cancer is most common malignancy in woman worldwide. Metastasis to the gastrointestinal tract (GI) is relatively rare occurring in only 3 % cases. Herein, we report a case of breast cancer metastasis localized only to the GI mucosa in the form of mucosal polyps which resembled typical hyperplastic polyps.
Case Description/Methods: 59-year-old female with history of pT2N2aM0, stage IIIA grade 2 invasive lobular carcinoma of the right breast status post mastectomy and axillary lymph-node dissection (showing 5/6 lymph node positive) along with adjuvant chemotherapy with Adriamycin, Cytoxan followed by weekly Taxol and radiation therapy. She had recent normal Computerized tomography and PET scan without any recurrent disease. She was referred for Iron deficiency anemia with hemoglobin 9.5 g/dL along with microcytosis and low ferritin measuring 4 g/L in absence of any overt bleeding. She underwent diagnostic esophagogastroduodenoscopy (EGD) and colonoscopy. Former was unremarkable but colonoscopy showed multiple 3-4 mm sessile polyps scattered through the colon. On Narrow band imaging (NBI), these polyps had irregular pit pattern. Multiple targeted biopsies were taken from there lesions that revealed metastatic lobular adenocarcinoma from breast primary. She had discussion with oncologist to restart chemotherapy **(Figure)**.
Discussion: Breast cancer frequently metastasizes to the bones, lungs, CNS, and liver, whereas metastasis GI tract is rare, occurring only in 3.4% of patients. Breast cancer metastasis to the GI can be asymptomatic or can present as nonspecific symptoms, such as abdominal pain, anemia, bleeding, diarrhea, weight loss or bowel obstruction. Radiological imaging can miss early lesions as seen in this case. On colonoscopy, the breast cancer metastases present as diffuse thickening of the colonic wall or as ulcerated or polypoid lesions. Colonic metastasis in the form of multiple sessile diminutive polyps scattered thought the colon is rarely reported in the literature. It is important to utilize NBI to evaluate pit pattern as any aberrancy may be indicative of non-hyperplasic nature of these otherwise hyperplastic appearing polyps on white light.



[1989] **Figure 1.** Colonoscopy showing hyperplastic appearing polyps in the colon (A to C) and irregular pit pattern under NBI (fig D).

S1990

Colonic Lymphangiomatosis

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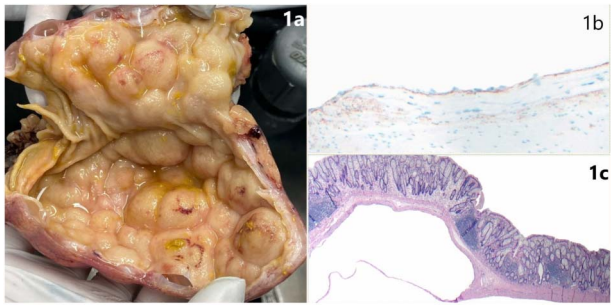
Introduction: Colonic Lymphangiomatosis
Case Description/Methods: A 73-year-old male with history of diabetes mellitus and chronic kidney disease underwent CT abdomen and pelvis with IV contrast (for the evaluation of hematuria and renal cyst), which showed incidental finding of free intraperitoneal air. The patient had a history of recent colonoscopy which showed a large concentration of 'polyps' in the sigmoid, not amenable for endoscopic removal. Subsequently the patient developed abdominal pain and nausea, and labs showed worsening leukocytosis 17K/uL. Repeat computed tomography (CT) abdomen revealed moderate free intraperitoneal air and innumerable colonic mucosal cysts of the very redundant sigmoid colon in the right upper quadrant. The patient underwent exploratory laparotomy, and although no perforation was seen, the sigmoid colon exhibited soft-tissue fullness, prompting partial sigmoid colectomy with primary anastomosis. The resected specimen showed large contiguous well circumscribed and simple cystic structures (up to 3 cm size) giving a sessile "polypoid" appearance of the mucosa (Figure a). Histologic sections demonstrated overlying unremarkable colonic mucosal surface without epithelial dysplasia or serrated neoplasia, large cystic spaces extending into the submucosa, focally separated by thin fibrous septae (**Figure** b). The contiguous cystic spaces within the muscularis propria were noted to be lined by a bland and attenuated cell layer, showing immunoreactivity for CD31, CD34 and D2-40 (podoplanin – an immunostain defining lymphatic space endothelium) (**Figure** c); compatible with dilated lymphatic spaces and consistent with colonic lymphangiomatosis (CL).

Discussion: CL should be considered as a differential in patients with multiple aggregated mucosal lesions that appear as polyps on endoscopy. Speculation on etiology has ranged from developmental (failure to establish connections to lymphatic drainage sites), or seen secondarily after trauma, prior surgeries, radiation, lymphatic obstruction possibly secondary to adjacent mass lesion, or previous inflammatory processes. Free intraperitoneal air may suggest impending clinical decline in such patients. Surgical resection is the treatment of choice in symptomatic patients.



[1990] **Figure 1.** (a) Gross image of the sigmoid colon, bottom aspect showing partial deroofing of the mucosa of a simple cystic cavity (b) Hematoxylin and Eosin (H&E) stain 40X (c) D2-40 positivity (brown membranous and cytoplasmic staining) 100X.

REFERENCE:
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S1991

Common Household Item as an Unusual Etiology of Bowel Perforation

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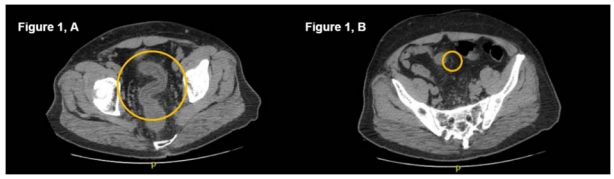
Introduction: Colonic perforation is defined by full-thickness injury to the colon wall with various etiologies. Presentation can vary according to the etiology of perforation. Patients usually describe abdominal pain as either localized or generalized, depending on the extent of spillage of intestinal contents and degree of peritonitis. Bowel perforation severity can range from a simple and medically managed condition to a life-threatening surgical emergency. We present a case of colonic perforation from an unsuspected etiology.
Case Description/Methods: A 51-year-old male presented to the hospital complaining of proctalgia, and rectal bleeding which had started 2 hours after self-administering an enema at home. After symptom onset, the patient realized he erroneously had used bleach instead of his usual homemade rainwater enema that he regularly uses to relieve chronic constipation. On examination, the patient had severe abdominal and rectal tenderness with visible dried blood around the anus. A CT scan of the abdomen revealed moderate circumferential wall thickening involving the sigmoid colon and rectum (**Figure** 1, A), in addition to pneumoperitoneum within the mesenteric fat adjacent to the sigmoid colon (**Figure** 1, B). The surgical team assessed the patient and was deemed not a good surgical candidate. Medical management was recommended with NPO, analgesia, intravenous fluids, and antibiotics with subsequent improvement. Patient was discharged home after a few days following resolution of symptoms and extensive counseling.
Discussion: Sodium hypochlorite is the compound typically found in household bleach, primarily used for its antimicrobial properties for cleaning purposes. Typical household bleach is a strong alkaline with a pH of 11-13, and ingestion is associated with severe esophageal injury, with severity determined by the amount and concentration of the ingested compound. In addition, bleach enemas have been fraudulently marketed as a medical treatment for autism, with several reports of devastating outcomes in young children. This case demonstrates the gravity of using bleach enemas as medical treatment due to the potential for severe colitis and perforation, as seen in our patient.



[1991] **Figure 1.** CT scan of the abdomen.

S1992

Case of Ileocolonic Intussusception With Tubulovillous and Tubular Adenoma Lead Points in a 43-Year-Old Male

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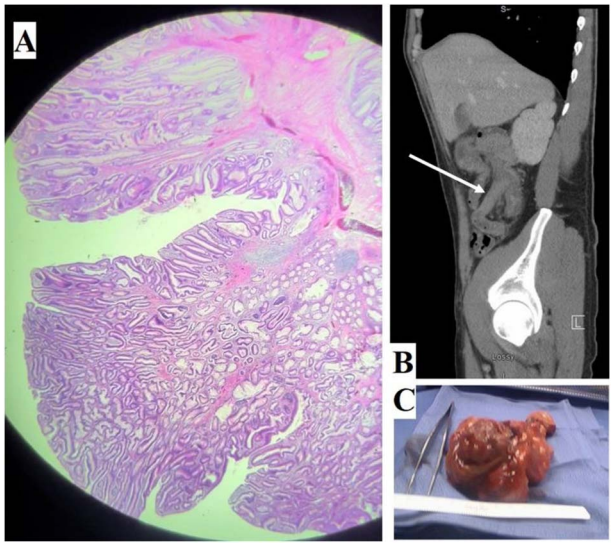
Introduction: Intussusception describes the telescoping of one segment of bowel into another. Though idiopathic intussusception most commonly causes bowel obstruction in children, intussusception in adults is uncommon and suggests malignancy. We present a case where intussusception symptoms allowed for the identification and resection of precancerous lesions in a patient.
Case Description/Methods: A 43-year-old male with history of hypertension presented with one-year history of diffuse, episodic, progressively worsening abdominal pain, 75 lbs. weight loss, and non-bloody diarrhea. He presented afebrile, hemodynamically stable, saturating well on room air. He displayed mild, right sided abdominal tenderness and CT scan showed 43 mm ileocolic intussusception. Patient underwent laparoscopic right hemicolectomy with end-to-end anastomosis of the terminal ileum and transverse colon. Resected right colon and terminal ileum specimen contained a 5.2x4.5x4.0-cm tubulovillous adenoma and 2.2x2.2x1.7-cm tubular adenoma without evidence of high-grade dysplasia or invasive adenocarcinoma. Resected colon tissue margins were free from adenomas. Surgical recovery and discharge progressed without incident (**Figure**).
Discussion: Intussusception rarely occurs in adults, with an annual incidence of ~2-3 cases per 1 million. Though classically associated with the triad of colicky abdominal pain, sausage-shaped abdominal mass, and currant jelly stools, in adults, intussusception commonly manifests as episodic paroxysms of severe abdominal pain and symptoms of bowel obstruction. Abdomen CT can distinguish intussusception from other etiologies of obstruction. Physicians classify intussusception by location, natural progression (fixed vs intermittent), and presence of lead point. Malignancy most frequently serves as the lead point in adults. Definitive management is surgery. Our patient presented with intermittent abdominal pain and weight loss. Ileocolonic intussusception was identified on CT, and patient underwent resection of affected bowel. Cecal tubulovillous and tubular adenomas, both > 2 cm in size, served as lead points and showed no signs of dysplasia. Intussusception of these lesions alerted clinicians to their presence so they could be resected prior to becoming dysplastic and cancerous.



[1992] **Figure 1.** A – Characteristic tubulovillous adenoma on path. B - Saggital view showing lead point mass, intussceptum and invaginated mesentery in right upper quadrant just inferior to the liver border and indicated by arrow. C - Resected segment of cecum found to have 5.2 x 4.5 x 4.0 cm tubulovillous adenoma and 2.2 x 2.2 x 1.7 cm tubular adenoma, the presumed lead points of intussusception.

S1993

Chilaiditi's Sign

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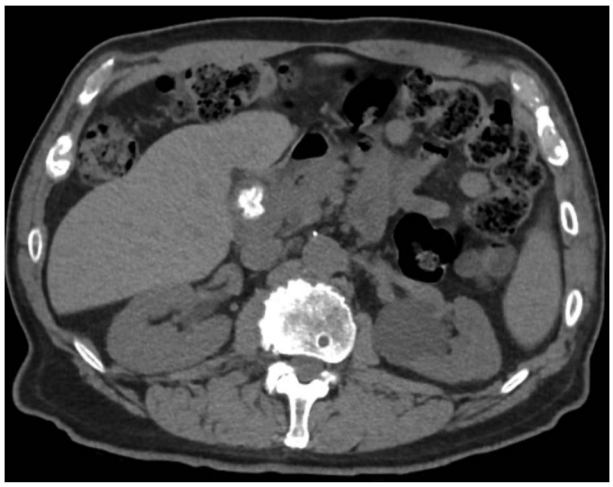
Introduction: Chilaiditi's sign refers to the incidental radiographic finding of large bowel interposed between the diaphragm and the liver. This finding can frequently be mistaken as pneumoperitoneum, a finding that is often thought of as a surgical emergency. In the following case, we describe a patient who was found to have Chilaiditi's sign on computed tomography (CT) imaging.
Case Description/Methods: A 75-year-old male with history of bladder cancer status post resection 6 days prior presented to the emergency room for lower abdominal pain and hematuria. He denied having any nausea, vomiting, or changes in bowel habits. Except for a hemoglobin of 12.6 g/dL, basic laboratory testing including a complete blood count and comprehensive metabolic panel was within normal ranges. Physical examination revealed suprapubic tenderness but was otherwise unremarkable. To further evaluate his symptoms, a CT of the abdomen and pelvis was performed, revealing a hematoma in the bladder wall and the appearance of free air under the diaphragm. However, upon further inspection, the air was noted to be within the lumen of a segment of colon which was interposed between the liver and the diaphragm (**Figure**), consistent with Chilaiditi's sign. This was thought to be an incidental finding, and the patient was referred to urology for further management of his bladder cancer.
Discussion: Chilaiditi's sign, or hepatodiaphragmatic interposition of the colon, is a rare radiological finding with a reported incidence of 0.025% to 0.28%. Due to air frequently found in the colon, patients with this condition can appear to have pneumoperitoneum due to the colon being near the diaphragm in an abnormal location. The finding is more common in males, older patients, and patients with dolichocolon, chronic lung disease, liver disease, or ascites. Although the cause of this condition is not clearly understood, absence or laxity of the ligament supporting the transverse colon or the falciform ligament is thought to contribute to this condition. Patients with this finding are generally asymptomatic and do not require any treatment. In rare cases, the finding is associated with clinical symptoms, such as abdominal pain, nausea, vomiting, and constipation; in these circumstances, the condition is termed Chilaiditi's syndrome.



[1993] **Figure 1.** Interposition of a stool-filled transverse colon between the liver and right hemidiaphragm.

S1994

Cecal Lymphangioma During Routine Colonoscopy

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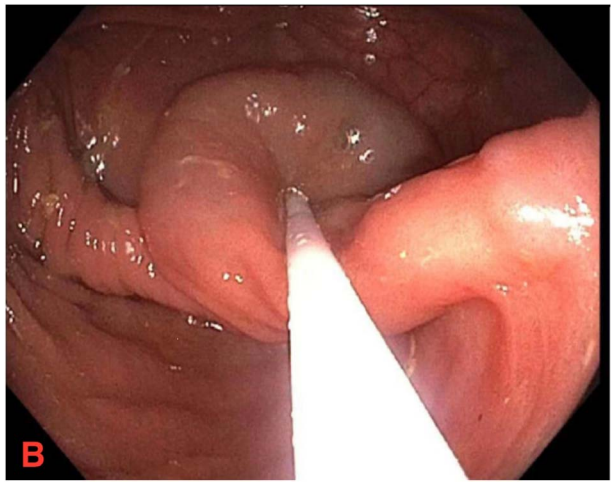
Introduction: Abdominal lymphangioma is a rare finding. Most of them arise from the mesentery or omentum, and those arising from the GI tract is extremely rare. Lymphangioma involving the colon is usually asymptomatic and can be encountered during screening colonoscopy. It is characterized by a soft, cystic appearing lesion that contains dilated lymphatic channels. Cecal lesions should be differentiated from appendiceal neoplasms including mucocele and carcinoid tumors.
Case Description/Methods: A 61-year-old male underwent a screening colonoscopy which revealed a soft cystic lesion in the cecum measuring about 20 mm wide, with a positive cushion sign. Appendiceal orifice and the ileocecal valve appeared normal. CT of the abdomen showed a low-density cystic lesion arising from the wall of the cecum and separate from the appendix. Endoscopic ultrasound (EUS) exam using a mini ultrasound probe revealed a cystic anechoic subepithelial lesion measuring (18 x 17 mm) with septations arising from the submucosa **(Figure)**.
Discussion: Lymphangioma of the colon is a rare asymptomatic finding often encountered during screening colonoscopy. It is characterized by a soft, cystic appearing lesion that contains dilated lymphatic channels. It is often solitary and is usually benign in nature. Cecal lesions, especially if in proximity to the appendiceal orifice should be differentiated from appendiceal neoplasms including mucocele and carcinoid tumors. Lymphangioma may be difficult to be differentiated from a lipoma on endoscopic appearance. Signal characteristics on CT imaging differ between the 2; Lipomas have characteristics similar to subcutaneous fat and usually have Hounsfield unit measurements between -65 and -120; Lymphangiomas on the other hand are cystic appearing with Hounsefield units corresponding to the fluid density and the average Hounsefield unit of the lesion in our patient was 17. Similarly, endosonographic features vary between the 2. Lipomas are hyperechoic lesions arising from the submucosa, whereas lymphangiomas are anechoic. Endoscopic appearance of a cystic lesion often with a bluish hue and a positive cushion/ pillow sign and ultrasonographic features (anechoic subepithelial lesion often with septations and without solid component) aid towards the diagnosis of lymphangioma without the need for invasive tissue diagnosis. Rare cases of intussusception from large cecal lymphangioma have been reported. Given the benignity, surgical intervention is not needed in asymptomatic patients.



[1994] **Figure 1.** positive cushion sign.

S1995

Colonoscopy-Associated Tension Pneumoperitoneum After Endoscopic Submucosal Dissection (ESD)

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Introduction: Colonoscopy is a low-risk procedure with complications including bleeding or perforation. Although rare, perforation can result in tension pneumoperitoneum, which can be fatal. There is little guidance for the management of this potentially fatal complication. Here we present a case of an ESD complicated by tension pneumoperitoneum treated with needle decompression.
Case Description/Methods: A 74-year-old male underwent a colonoscopy that identified a rectosigmoid 4 cm Paris II-a laterally spreading tumor. EUS failed to identify deep submucosal invasion and endoscopic mucosal dissection (ESD) was planned. During ESD, a full thickness tear was noted. As the perforation was closed with hemoclips, the patient developed hypoxic respiratory failure, hypotension, and distended/tympanic abdomen, suggesting of tension pneumoperitoneum. Colorectal surgery team was consulted and performed needle decompression of the abdomen by inserting a 14-gauge angiocatheter in the left upper quadrant, inferior to the costal margin. The patient's abdomen immediately decompressed and his hypoxia and blood pressure stabilized. Broad spectrum IV antibiotics was started and patient was admitted to the ICU without requiring further surgical interventions (**Figure**).
Discussion: Perforation risk from ESD ranges from 1.4% to 10%. Risk factors for perforation include increased size, submucosal fibrosis, lateral spreading polyps, and location in cecum or ascending colon. Pneumoperitoneum is usually benign and can be managed conservatively with antibiotics. However, rarely tension pneumoperitoneum occurs, where excessive pressure builds in the peritoneal space. This can compress the inferior vena cava and diaphragm, leading to lowered cardiac output and reduced lung volumes. If there is evidence of hemodynamic instability, immediate needle decompression should be performed. A large bore catheter needle should be inserted either 2cm below umbilicus or 5cm superior and medial to the anterior superior iliac spines, preferably the left side. Angiocatheters are ideal because they can puncture sharp but when the needle is removed the plastic catheter is unlikely to cause injury. Successful placement should lead to expulsion of air and improvement of hemodynamics. Tension pneumothorax is a rare complication that results from iatrogenic perforation and can be fatal if not quickly identified. Needle decompression is a skill that gastroenterologists should be familiar with because it can be life saving.

S1996

Colonic Adenocarcinoma With Pancreatic Metastasis

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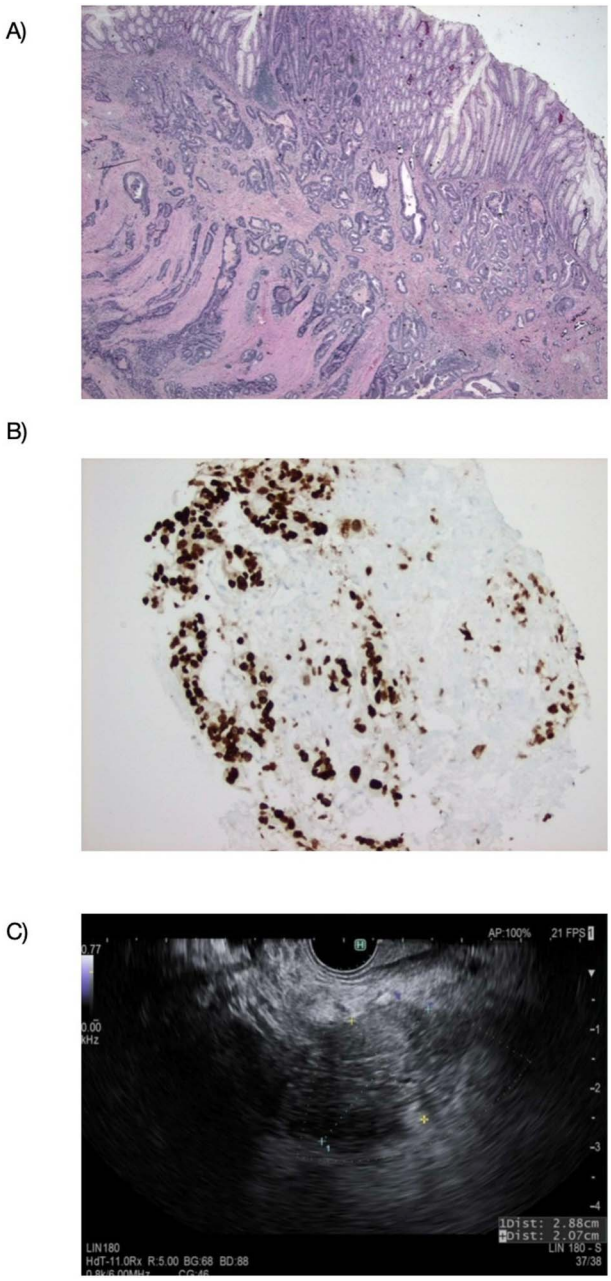
Introduction: The vast majority of pancreatic tumors are of primary origin. Colonic metastasis to the pancreas is rare and portends a poor prognosis. The diagnosis remains challenging, hinging on histopathological examination of the tissue sample. Optimal treatment remains unknown.
Case Description/Methods: A 64-year-old woman with sigmoid colorectal adenocarcinoma (CRC) stage IV (pT4a pN2b pM1c) with hepatic and ovarian metastases was evaluated for progressive obstructive jaundice with worsening, non-radiating left-sided abdominal pain over one week. Associated symptoms included tea colored urine, acholic stools and generalized pruritus. Abdominal exam was without guarding and confirmed these findings. Admission labs were notable for AST 177, ALT 97, ALP 1095, T Bili 9.7, D Bili 8.6, CEA 103.0, AFP 1.8 and CA 19-9 11 (**Table**). CEA had increased from 67.3 3 months prior. CT showed intra and extrahepatic ductal dilatation. RUQUS demonstrated a hypoechoic mass in the pancreatic head and a dilated main pancreatic duct not present on MRI one year prior. EUS confirmed the mass measuring 29 mm x 20 mm. FNA was performed with cytology positive for malignant cells. Immunohistochemical stains were positive for CK20, CK19, CDX2, SATB2, and CA19.9, and negative for CK7 and PAX-8 (**Figure**). These findings support a diagnosis consistent with metastasis of primary colonic adenocarcinoma origin.
Discussion: Metastatic tumors of the pancreas are rare, comprising only 2% of pancreatic tumors. Of these, renal cell carcinoma, lobular carcinoma, and endometrial carcinoma constitute the majority. CRC is even less common, with preferential metastasis sites including the liver, lung, peritoneum and lymph. Metastasis occurs contiguously, via the lymphatics or by hematogenous spread. Adenocarcinoma predominantly metastasizes to the liver through the lymphatics whereas mucinous or signet ring cell adenocarcinoma commonly metastasize to the peritoneum. Up to 20% of patients are asymptomatic. Survival is often limited, with 90% of lesions unresectable at the time of diagnosis. Those with multiple metastases may be treated with palliative chemotherapy. Here, the histologic pattern confirmed invasive CRC with adjacent pancreatic architecture. Regorafenib was investigated as salvage therapy. While this patient's advanced disease precluded additional surgical treatment, those with solitary solid tumor metastasis to the pancreatic may benefit from surgical resection, with 5 year survival rates reaching 50% for solitary metastasis.



[1996] **Figure 1.** Colorectal adenocarcinoma metastasis to the pancreas (A) Invasive colonic adenocarcinoma, low grade (H&E, 200x). (B) Metastatic adenocarcinoma involving pancreas (H&E, 200x), with confirmatory immunohistochemical stain for CDX2 (200x). (C) Pancreatic head mass on endoscopic ultrasound.

Table 1. Admission Labs

Laboratory Test	Value
AST	177
ALT	97
ALP	1095
Total Bilirubin	9.7
Direct Bilirubin	8.6
CEA	103.0
AFP	1.8
CA 19-9	11

S1997

Cecal Bascule: A Rare Cause of Large Bowel Obstruction

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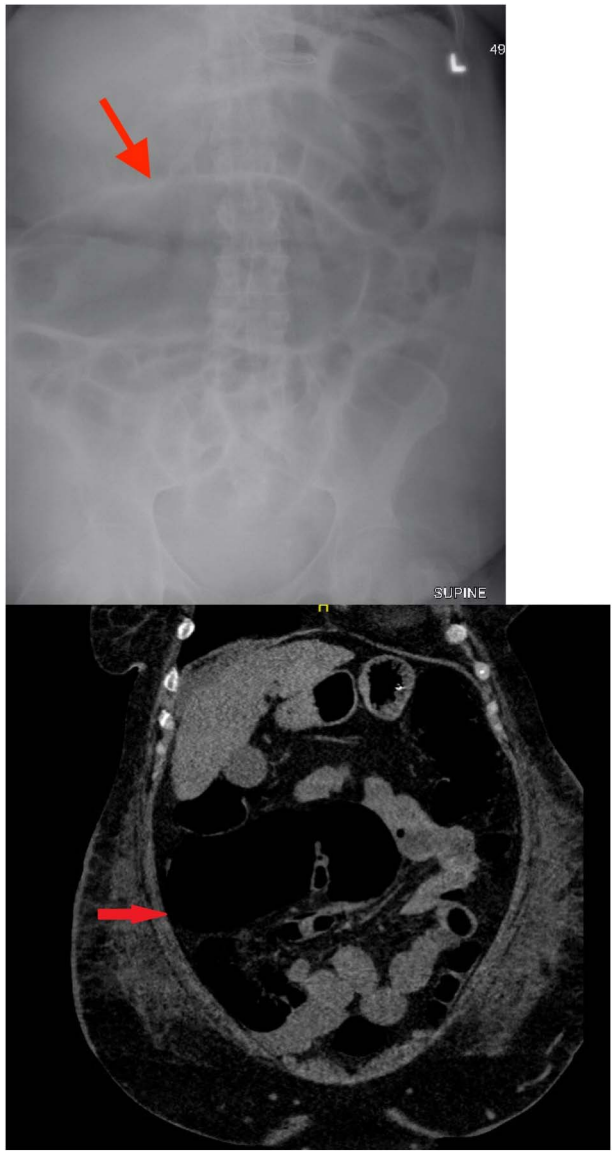
Introduction: Cecal bascule is a rare form of cecal volvulus, which is characterized by an anterior and superiorly displaced cecum in turn causing large bowel obstruction. It accounts for 0.01% of adult large bowel obstructions. Here we present a case of cecal bascule in a cirrhotic patient.
Case Description/Methods: A 63-year-old female with history of alcoholic cirrhosis (MELD 20) and cesarean section presented to the emergency department with intermittent hematochezia and melena. At admission, she was hemodynamically stable with a hemoglobin of 5.7 g/dL. She underwent esophagogastroduodenoscopy (EGD) which demonstrated small esophageal varices without stigmata of a recent bleed, antral gastritis, and duodenitis. Due to a largely unrevealing EGD, she was scheduled to have a colonoscopy. However, the patient had difficulties tolerating the bowel prep due to increasing abdominal pain. An abdominal X-ray demonstrated a large gaseous lucency in the right mid abdomen below the level of the transverse colon which was concerning for cecal bascule. A computed tomography (CT) scan of the abdomen demonstrated a redundant cecum folding anteriorly with superior rotation into the upper right hemiabdomen without definite point of transition and diffuse small bowel dilation up to 4.3 cm. Findings were consistent with a cecal bascule. Patient underwent an exploratory laparotomy with right hemicolectomy. Patient had a prolonged, complicated post-operative course with multiorgan failure and finally died 30 days after the surgery (**Figure**).
Discussion: Cecal bascule involves the upward folding of the cecum as opposed to an axial twisting of the colon as seen in more common types of cecal volvulus. For this phenomenon to occur, a patient will often have a mobile and redundant cecum that causes the volvulus. This may occur as a congenital anomaly secondary to a failed fusion in development between the ascending colon mesentery and the posterior parietal peritoneum. Additionally, this may be acquired from abdominal adhesions, pregnancy or even after a colonoscopy. Like other types of volvuli, treatment of cecal bascule requires surgical detorsion to prevent further complications. It is therefore important that cecal bascule be identified early for proper surgical planning and appropriate intervention. In our case, the poor outcome was due to the underlying decompensated cirrhosis.



[1997] **Figure 1.** Abdominal X-ray demonstrating a large gaseous lucency in the right mid abdomen near the transverse colon CT of the abdomen demonstrating an anteriorly and superiorly rotated cecum into the upper right hemiabdomen.

S1998

Colonic Merkel Cell Carcinoma of Unknown Primary: Small Cell Carcinoma Outside the Usual

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Introduction: Merkel cell carcinoma (MCC) is a rare neuroendocrine skin carcinoma with documented metastases to the liver, lungs, and gastrointestinal (GI) tract. Colonic metastases are rare but seen with recurrent or primary cutaneous lesions. Described is a patient who presented with bowel obstruction with a hepatic flexure MCC of unknown primary (MCCUP).
Case Description/Methods: A 69-year-old female with a history of breast, lung, and anal cancer presented to the emergency department with abdominal pain and distension. Computed tomography of her abdomen demonstrated dilated loops of small bowel and a partial obstruction with transition point in the hepatic flexure. Colonoscopy demonstrated a 4 cm mass at the hepatic flexure obstructing the lumen. Biopsy revealed a high-grade neuroendocrine carcinoma. A right colectomy and histopathology confirmed small cell neuroendocrine carcinoma involving the colonic wall into the pericolic adipose tissue with nodal involvement. It was positive on cytokeratin CAM 5.2, synaptophysin, and Merkel cell polyomavirus (MCPvY) and negative on CDX-2 and TTF-1, excluding primary bowel or lung small cell carcinomas, respectively. Dermatologic evaluation did not reveal a primary cutaneous lesion. Genetic testing was unremarkable.
Discussion: This is the first case of MCCUP presenting with colonic obstruction; prior described cases of MCC metastatic to the colon were recurrent disease or from primary skin lesions. Because MCC is rare, has non-specific symptoms, and may lack a primary lesion, MCCUP must be distinguished from other small round blue cell malignancies more commonly found in the GI tract. Thus, neuroendocrine, keratin and MCPyV ancillary staining are critical to distinguish MCC from B-cell lymphoma, small cell carcinoma of bowel or lung primary, and other metastatic dermal malignancies. MCPyV testing in the absence of prior diagnosis is uncommon but vital to the workup of neuroendocrine carcinomas when CDX-2 and TTF-1 are negative as MCPyV positive lymph nodes predict worse outcomes such as disease-free survival. In this patient immunosuppression and prior radiation increased the risk of MCC, and even suggest that this might be a colonic primary. Rarely, MCC and MCCUP are root causes of neuroendocrine carcinomas of the GI tract. In immunocompromised patients, biopsy and pathologic staining are necessary to distinguish insidious malignancies. MCPyV analysis is helpful for diagnosing MCCUP and informing its prognosis.

S1999

Colonic Ischemia Presenting as a Near Obstructing Colonic Mass

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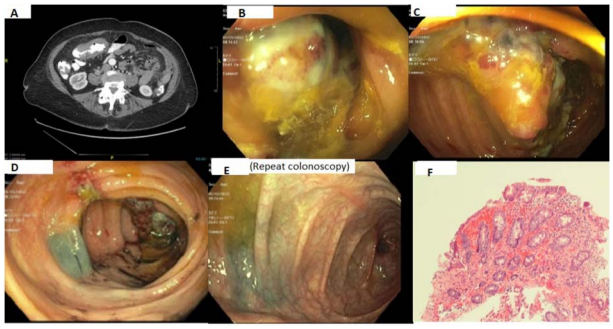
Introduction: Colonic malignancy is a concern in the patients presenting with rectal bleeding and noted to have colonic mass on colonoscopy. However, in elderly patients with risk factors, Colonic ischemia (CI) should be considered as a possible differential. Clinical assessment and interval Colonoscopy does change the management.
Case Description/Methods: A 78-year-old female presented with complaints of crampy lower abdominal pain, diarrhea, and rectal bleeding. Physical exam was significant for abdominal tenderness, otherwise unremarkable. A computerized tomography of the abdomen with contrast showed mural thickening of the transverse colon with luminal narrowing (**Figure A**).Colonoscopy showed an ulcerated, semi-circular, polypoidal nearly obstructing mass, 10 cm in length and site was tattooed(**Figure B-D**). Pathology showed colonic mucosa with mild hyperplastic changes, focal ulceration, extravasated red blood cells, and glandular atrophy suggestive of ischemic induced changes (**Figure F**).Carcinoembryonic antigen level was 3.9 (normal $<$ 5.0 ng/mL). The patient was managed conservatively with bowel rest and antibiotics. A repeat colonoscopy in 8 weeks showed fully resolution of the mass adjacent to the tattoo site (**Figure E**)
Discussion: Colonic ischemia occurs due to reduced colonic blood flow. Morphologic changes in CI vary with the duration and the severity of injury , from mild mucosal and submucosal edema, with or without necrosis and ulcerations , to severe ischemia causing transmural infarction. In most cases, the diagnosis of CI can be easily made on mucosal biopsies, in conjunction with the clinical, radiologic and colonoscopy findings. In rare cases, CI can appear as a mass-like lesion, mimicking a carcinoma, posing a challenge to diagnosis. Substantial submucosal edema and hemorrhage may be responsible for the mass-like appearance, which is not evident on mucosal biopsies. Due to concern for malignancy, often these patients undergo surgery. CI is a dynamic disease, with a rapid changing clinical picture. Khor at al reported resolution of the mass-like lesions in CI as early as one week, making the repeat colonoscopy a useful tool in cases where the diagnosis is not straightforward.



[1999] **Figure 1.** A: Wall thickening and luminal narrowing on CT; B-D: nearly obstructing mass on colonoscopy; E: - Prior tattooed area with complete resolution of the colonic mass on repeat colonoscopy 8 weeks later; F: pathology.

S2000

Colonoscopy-Induced Transient Mobitz Type 1 Block

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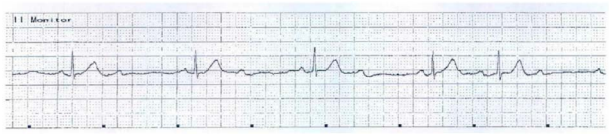
Introduction: Propofol is a commonly used anesthetic in endoscopic procedures. It can prolong the atrioventricular (AV) conduction through vagal stimulation leading to AV block. We report a unique case of a previously healthy patient undergoing a routine screening colonoscopy who developed a Mobitz type 1 block during the procedure, in which propofol was the sole agent used for sedation.
Case Description/Methods: A 74-year-old female with a medical history of diverticulosis and a family history of colon cancer in her first-degree relative presented for a routine colonoscopy performed under monitored supervised propofol sedation. During the final phase of the colonoscopy which was performed with minimal air insufflation, she was observed to have a transient 2:1 heart block mixed with periods of 3:2 heart block on the monitor. After the procedure was completed, she reported no cardiac or neurological symptoms. Review of an electrocardiogram strip showed lengthening of the PR interval consistent with Wenckebach (Mobitz type 1 block; **Figure**. This resolved post procedure. All labs were within normal limits. Prior to this procedure, she had no cardiac history nor was she on any medications. She was referred for a formal cardiology evaluation which included a 14-day Holter monitor showing 22 asymptomatic episodes of supraventricular tachycardia with longest being 26. No treatment was initiated. She also underwent an echocardiogram showing an ejection fraction of 75%, with a normal left ventricle. The incident was deemed to be a vagal affect due to the probe being in the colon/rectum and the effects of propofol. She has not had any recurrences of the Wenckebach phenomenon on subsequent electrocardiograms and continues to remain asymptomatic.
Discussion: Propofol can prolong the AV conduction system leading to a heart block even in patients without any cardiac history. The suggested mechanism is hypervagal stimulation causing slow sinus rate, prolongation of stimulus to the bundle of His interval, lengthening of the Wenckebach cycle and the effective refractory period. While air distention in the stomach or colon can also result in a vasovagal reaction and bradycardia, cases of nodal block in this situation are extremely rare. This case demonstrates that in addition to expected vasovagal bradycardia, nodal block is a rare possibility and hence the need for close continuous cardiac monitoring during endoscopy.



[2000] **Figure 1.** Lengthening of the PR interval consistent with Wenckebach (Mobitz type 1 block).

S2001

Chronic Norovirus Infection in a Double Solid Organ Transplant Patient

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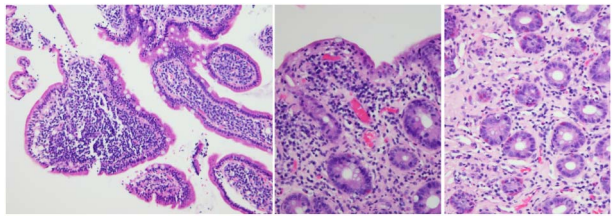
Introduction: Infectious diarrhea is a common complication in the postoperative course of a solid organ transplant (SOT) recipient. While self-limiting in immunocompetent patients, transplant patients on long-term immunosuppression can have severe, prolonged disease with significant morbidity. We present a case of chronic diarrhea due to recurrent norovirus infection in a double SOT patient to encourage early recognition.
Case Description/Methods: A 61-year-old male presented with 35-pound weight loss despite a good appetite and large-volume watery diarrhea intermittently for 2 years. He had a liver-kidney transplant 14 years prior secondary to cryptogenic cirrhosis and renal cell carcinoma. Immunosuppression consisted of prednisone, tacrolimus, and mycophenolate mofetil (MMF). Stool PCR was positive for norovirus and negative for other viruses, bacteria, and parasites. His MMF dose was reduced with no benefit. He was discharged with supportive care with initial improvement in the diarrhea but returned to the hospital 4 other times with worsening diarrhea and weight loss. Infectious workup was persistently positive for norovirus. Bi-directional endoscopy with biopsies revealed colonic mucosa with rare epithelial apoptosis, chronic duodenitis, and increased intraepithelial lymphocytosis in the duodenum and ileum consistent with chronic norovirus (**Figure**). The full diagnostic workup is detailed in **Table** 1. He was managed conservatively during each hospitalization with fluids and antimotility agents and recently discharged home with plans to start nitazoxanide outpatient.
Discussion: Norovirus infection among SOT patients can lead to severe and symptomatic chronic infection. Patients can develop dehydration, transplant rejection, and malnutrition making them higher risk for hospitalizations and death. It is unclear why some immunocompromised patients recover spontaneously while others demonstrate a protracted course but supportive care is the mainstay of therapy. Limited case series have shown nitazoxanide to be effective in treating SOT patients with chronic norovirus infection. However, nitazoxanide needs to be continued until stool RNA studies become negative. This case highlights the importance of considering chronic norovirus when a SOT patient presents with chronic diarrhea and weight loss. Early initiation of supportive care and nutrition consultation are imperative in reducing morbidity in these patients. Nitazoxanide can be effective in patients that are refractory to supportive therapy.



[2001] **Figure 1.** Duodenal biopsy (A): Focal intraepithelial lymphocytosis and lamina propria plasma cell infiltrates. Terminal ileum biopsies (B,C): Focal intraepithelial lymphocytosis and lamina propria plasma cell infiltrates (B); popcorn-like epithelial apoptosis (C).

Table 1. Diagnostic Workup

Test/Procedure	Result
Creatinine, serum	2.1 mg/dl (baseline 1 mg/dl)
Stool PCR	-Positive for norovirus -Negative for *Clostridium difficile* toxins, *Salmonella, Shigella, Yersinia*, and *Campylobacter*
Osmolality, feces	420 mOsm/kg
Fecal fat	Abnormal
Duodenal biopsy	-Mucosa with intraepithelial lymphocytosis, dense plasma cell infiltrates in the lamina propria, and rare apoptotic bodies -Negative for CMV, EBV, HSV
Stomach biopsy	-Gastric antral and oxyntic gland mucosa with chronic inactive gastritis -Negative for *H. pylori*
Right colon biopsy	Rare epithelial apoptosis
Left colon biopsy	Rare epithelial apoptosis
Terminal ileum biopsy	Mucosa with intraepithelial lymphocytosis, dense plasma cell infiltrates in lamina propria, and rare apoptotic bodies

S2002

Colonic Schwannoma: A Cause for Nerves?

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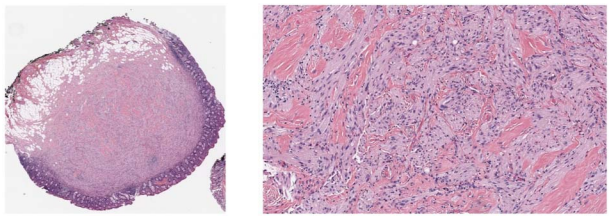
Introduction: Schwannomas arise from schwann cells, and though they are the commonest of all peripheral nerve tumors, it is exceedingly rare for them to be detected in the lower gastrointestinal (GI) tract. Here, we present the case of a submucosal colonic schwannoma detected incidentally as part of a routine colonoscopy for colorectal cancer (CRC) screening and discuss the clinical significance of such tumors.
Case Description/Methods: A 59-year-old male patient with intermittent constipation presented for colonoscopy for CRC screening. A previous colonoscopy 7 years prior had been unremarkable. Family history was notable for CRC in several second-degree relatives. The patient's past medical history was significant for non-alcoholic fatty liver disease, well-controlled human immunodeficiency virus infection and prediabetes. Physical examination was unremarkable. At colonoscopy, an 8 mm submucosal lesion was found in the cecum. This was sessile and firm, and did not demonstrate a pillow sign characteristic of lipoma. The lesion was resected using a saline injection-lift technique and hot snare. At histology, the lesion was described as tan-pink polypoid tissue, with negative margins (**Figure**). Immunohistochemically, the tumor cells were diffusely and strongly positive for S100 and negative for CD117, DOG1, SMA and desmin. This was consistent with a diagnosis of schwannoma.

Discussion: When GI schwannomas arise, they are most commonly found in the upper GI tract, with 60-70% of GI cases found in the stomach and only 3% in the colon. There are no clear risk factors for their development other than advanced age. As in our patient's case, colorectal schwannomas are typically detected incidentally on screening colonoscopies. They can be asymptomatic, or present with rectal bleeding (22.9%), abdominal pain (15.6%) or constipation (7.3%). The mass effect of large schwannomas can lead to colonic obstruction necessitating surgical resection of the tumor, but smaller lesions can typically be resected endoscopically. Schwannomas present as submucosal lesions and are almost always benign, with only atypical versions harboring any malignant potential. Numerous studies have demonstrated that recurrence after complete resection is rare, even after extended follow-up. There is no established guidance regarding follow-up intervals for patients with colorectal schwannomas, owing to their rarity. Based on the lack of malignant potential and the low risk of recurrence, we recommended a repeat colonoscopy in 5 years for our patient.



[2002] **Figure 1.** Cecal schwannoma in macroscopic (left) and microscopic (right) views.

S2003

Chronic Antibiotic-Resistant Pouchitis: A Complicated Entity

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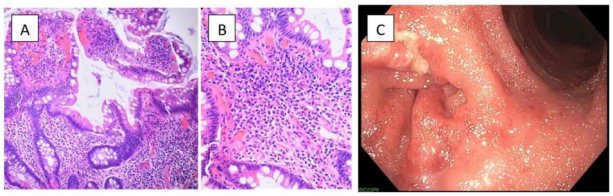
[1]The Brooklyn Hospital Center, Brooklyn, NY; [2]Blanchard Valley Health System, Findlay, OH.

Introduction: Patients who undergo restorative proctocolectomy and ileoanal anastomosis can develop pouchitis as a common chronic complication. A rare subset of patients fails to respond to multiple antibiotic therapies and develop chronic antibiotic refractory pouchitis (CARP). We present a case of a 45-year-old male with pouchitis refractory to chronic antibiotic therapy and histology demonstrating chronic inflammatory changes.
Case Description/Methods: A 45-year-old male with a medical history of ulcerative colitis status post ileoanal anastomosis had a course complicated by recurrent episodes of pouchitis for several years despite several courses of antibiotic therapy. He reports at least 3 episodes of pouchitis in a year. The patient had multiple surveillance colonoscopies, which revealed evidence of mild chronic inflammation of the pouch. Magnetic resonance imaging (MRI) of the perineum was notable for small intersphincteric fistulous tracts extending from the anal gland, which had to be repaired. C-reactive protein (CRP) and calprotectin levels were normal. Immunoglobulin g4 (IgG4) and antineutrophil cytoplasmic antibodies were negative. Most recent biopsies taken from the pouch demonstrate moderate chronic inflammation (**Figure**). Magnetic resonance cholangiopancreatography (MRCP) is negative for primary sclerosing cholangitis. The patient is being managed with mesalamine and probiotics and is currently asymptomatic.
Discussion: CARP is emerging as an entity associated with poor quality of life and increased health care costs. Genetic predisposition to immune system dysregulation is considered a contributing factor. CARP fails to respond to multiple courses of antibiotic therapy. Therefore, the management of CARP is difficult and limited. Current literature on the management of CARP is scarce and mainly involves immunomodulatory therapy and probiotics. It is essential to keep this differential diagnosis in mind in patients with recurrent pouchitis episodes and start them on immunomodulator treatment and probiotics rather than repeated courses of antibiotics.



[2003] **Figure 1.** A, B Histopathology showing edema, acute and chronic inflammation in the ileal villi C. Colonscopy image demonstrating gross inflammation of the colonic mucosa.

S2004

Colonic Varices as a Complication of Pancreatic Adenocarcinoma: A Case Report and Literature Review

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Introduction: Colonic varices are a rare subtype of ectopic varices with unknown prevalence rates, likely due to under-diagnosis. They form due to venous anomalies, portal hypertension, splenic or portal vein (PV) thrombosis and mesenteric vein obstruction. We present a rare case of isolated colonic varices related to pancreatic cancer.
Case Description/Methods: A 64-year-old male with pancreatic cancer presented with hematochezia. Endoscopic evaluation at an outside facility showed fresh blood in the colon and terminal ileum. His hemoglobin dropped from 13 to 6 mg/dL and a tagged RBC scan identified extravasation in the right lower quadrant, localizing to the ileum. He was transferred to our hospital for a retrograde single balloon enteroscopy, which noted isolated ascending colon and hepatic flexure varices (felt to be the source of bleeding) and normal ileum. A CT angiogram revealed the pancreas mass encased the celiac axis, superior mesenteric artery, and portal confluence with occlusion of the superior mesenteric vein (SMV) and extensive collateral vessels in the hepatic flexure/ascending colon. Interventional radiology and surgical oncology were consulted for management. Given extensive vasculature involvement, no interventions were possible, and patient was medically managed.
Discussion: Pancreatic cancer is a cause of left sided portal hypertension through occlusion of either the splenic vein or a non-splenic vein branch of the PV. Isolated colonic varices secondary to pancreatic cancer are rarely described. The gold standard for diagnosis is CT or selective mesenteric angiography. Often, they are diagnosed by colonoscopy for lower GI bleed evaluation but can be missed due to flattening with insufflation or blood precluding visualization. Treatment options are limited and mostly based on recommendations from case reports as there are no guidelines. For uncomplicated cases, conservative management with laxatives and iron supplementation is reasonable. For SMV occlusion, stenting of the SMV can reduce PH (table 1). In active bleeding, options include embolization, endoscopic therapy (sclerotherapy, cyanoacrylate injection, argon plasma coagulation, and band ligation), or transjugular intrahepatic portosystemic shunt (TIPS). However, if significant bleeding, laparoscopic ligation or colectomy may be indicated. Management of colonic varices due to pancreatic malignancy remains controversial and may require a multidisciplinary approach.

S2005

Cecal Bascules: A Rare Volvulus Entity

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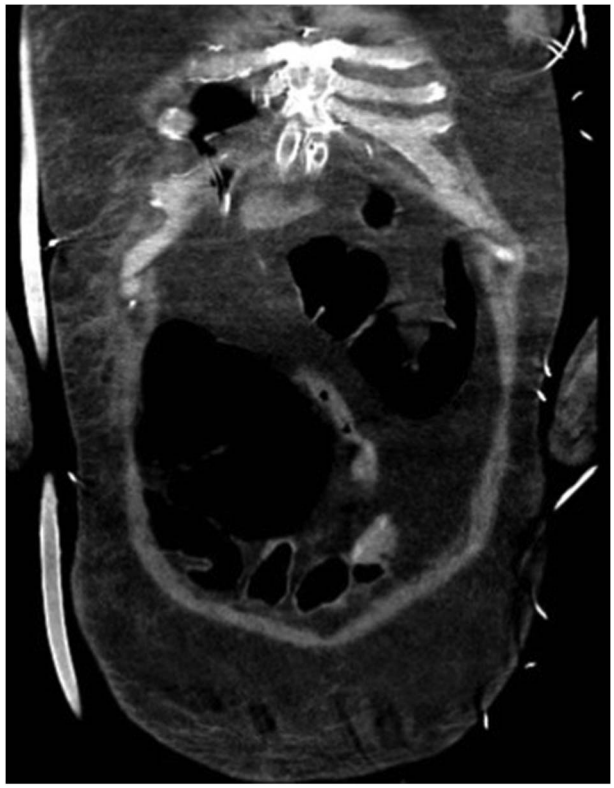
Introduction: Cecal bascule is a special type of cecal volvulus and is a rare occurrence affecting 2.8–7.1 per million people per year, accounting for 1–2% of all large bowel obstructions. There are only a handful of case reports about cecal bascules. We present a case of a critically ill patient with cecal bascule that required conservative management due to high surgical mortality risk.

Case Description/Methods: A middle-aged male with non-ischemic cardiomyopathy, atrial fibrillation, and hypertension was admitted for cardiogenic shock and underwent heart transplantation complicated by right heart failure and cardiogenic shock requiring right ventricular assist device, intra-aortic balloon pump, and vasopressors, acute respiratory distress syndrome requiring mechanical ventilation, acute liver injury, and acute kidney injury requiring renal replacement therapy. Throughout his course, he had progressive abdominal distension with abdominal X-ray showing severe colonic distension. Subsequent CT showed anterior and medially displaced cecum (**Figure**), consistent with cecal bascule, and dilated small bowel loops up to 4.1cm. General surgery was consulted and recommended conservative management with nasogastric tube for decompression given the patient's multisystem organ failure. He developed hematochezia and worsening shock for which GI was consulted for consideration of endoscopic decompression. However, repeat CT imaging noted worsening small bowel dilation with new pneumatosis intestinalis in the terminal ileum, concerning for ischemia. Given the patient's critical illness with poor prognosis and high morbidity and mortality with any intervention, supportive management with transfusions was recommended and, ultimately, the family elected to transition the patient to comfort care.
Discussion: Cecal bascule is a special type of cecal volvulus (type III) in which there is anterior medial folding of the distended cecum without true torsion. This is in contrast to the usual mechanism of colonic volvulus', in which there is an axial twisting of the mobile colon on itself. It causes severe distension and a characteristic large cecum positioned medially on imaging. Cecal bascules are typically managed with surgical input given their complexity and risk for torsion, ischemia, and perforation.



[2005] **Figure 1.** CT in coronal view of cecal bascule.

S2006

Colonic Ganglioneuroma: A Rare Finding During Colonoscopy

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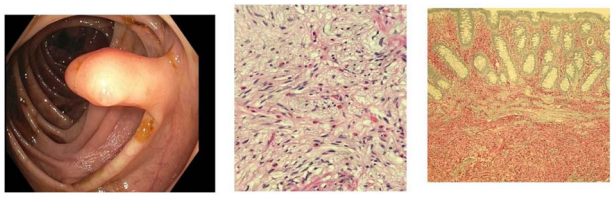
Introduction: Gastrointestinal ganglioneuromas are rare and benign hamartomatous tumors that originate from the autonomic nervous system.
Case Description/Methods: A 45-year-old female presented to our clinic with a recent diagnosis of diverticulitis. The patient recovered from her diverticulitis and was scheduled for a colonoscopy to follow up on her diverticulitis. During the colonoscopy, the patient was found to have a large polyp measuring around 15mm in the transverse colon which was excised by hot snare polypectomy (**Figure**). Pathology from the polyp showed it to be a ganglioneuroma of the colon (**Figure**)
Discussion: Ganglioneuromas are benign tumors of undifferentiated neural crest cells and are uncommon worldwide and can occur at any autonomic location. Ganglioneuromas normally have a predilection for the head, neck, and or adrenal glands. Endoscopically, intestinal ganglioneuromas have no discerning phenotypic characteristics which can distinguish them from other types of colon polyps. They are definitively diagnosed by biopsy followed by histology, which demonstrates immunoreactivity to S100 with comma-shaped nuclei mixed with aggregates of ganglion cells (**Figure**). Gastrointestinal ganglioneuromas are usually treated endoscopically and completely excised. Currently, no guideline exists on the management of solitary ganglioneuromas or recommendations for surveillance colonoscopy. However, most authors agree that repeat colonoscopy is not necessary due to the benign nature of the lesion, which tends not to recur. In conclusion, gastrointestinal ganglioneuromas are rare and benign hamartomatous tumors that originate from the autonomic nervous system. They are generally not associated with any systemic or genetic conditions and tend not to recur. As a result, they can be safely excised endoscopically without complications.



[2006] **Figure 1.** Ganglioneuroma Images. Left: large polyp. Middle : Pathology. Right: Histology showing immunoreactivity to S100.

S2007

Chronic Lymphocytic Leukemia Presenting as Colonic Ulcers

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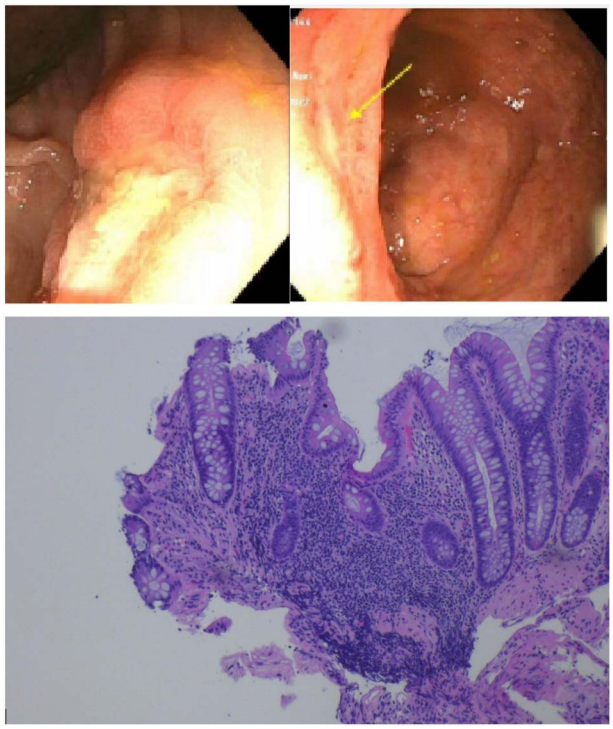
Introduction: Chronic Lymphocytic Leukemia (CLL) accounts for 25% of leukemias. One can present with hepatomegaly, splenomegaly, and lymphadenopathy. CLL infiltration in the gastrointestinal (GI) mucosa is rare. Colonic CLL can develop late in the disease course with mild to no GI symptoms. Awareness of CLL and its various extra-nodal presentations allow for prompt diagnosis and treatment.
Case Description/Methods: An 80-year-old female with untreated CLL presented with 2 months of rectal bleeding. She denied weight loss, anorexia, night sweats, blood thinners, and NSAID use. She had WBC 34.3, platelets 139, and a normal Hgb of 13.2. Colonoscopy showed ulcerations at the ileocecal valve and transverse colon, a 30 mm ascending colon polyp, and multiple 10-20 mm transverse and descending colon polyps. Pathology showed only chronic inflammation of the ulcerated regions, and a sessile serrated adenoma at the ascending colon. The remaining polyps were not removed due to concern for cancer and potential colectomy. A CT chest, abdomen, and pelvis was unremarkable. Tumor markers showed CEA 8 and normal Ca19-9 and Ca-125. Due to an unclear diagnosis, a second colonoscopy was performed with repeat biopsies and removal of all polyps in the descending and sigmoid colon. Pathology results were negative for inflammatory bowel disease and infection. The polyps were tubular adenomas and hyperplastic. However, immunohistochemical analysis was positive for CD5/CD43 and CD23, indicative of CLL in the ulcerated mucosa. Treatment options were discussed with surgery and oncology. The patient was offered right colon resection or endoscopic removal of the remaining polyps prior to chemotherapy (**Figure**).
Discussion: Colorectal lymphomas are rare and account for 1% of all GI malignancies with CLL usually found proximal to the hepatic flexure. In this case, the presence of ulcerations and large polyps were concerning for colorectal cancer. However, the initial work-up was negative. After a repeat colonoscopy, testing for specific CLL markers was requested. In a review of literature, chemotherapy alone for colonic CLL had a perforation risk of 15%. While it is unclear if surgical treatment is beneficial, it is a potential option. Due to the high risk of perforation on chemotherapy, recommendations included right hemicolectomy or endoscopic removal of the remaining polyps prior to starting treatment. This demonstrates the importance of knowing the varying presentations of colonic CLL as its treatment may require multidisciplinary discussion.



[2007] **Figure 1.** Colonic ulcers located at the transverse colon (top left) and IC valve (top right). H&E stain of the colonic mucosa (bottom) that showed positive markers for CLL on IHC analysis.

S2008

Colonic Ischemia: When a Rare Etiology Leads to an Unusual Presentation

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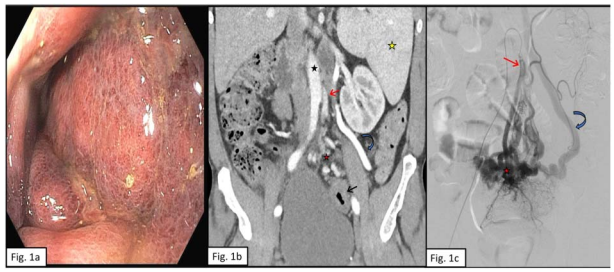
Introduction: Colon ischemia is the most common form of intestinal ischemia. It is acute and transient but can be chronic if the leading cause is not recognized and reversed. We present a challenging case of chronic ischemic colitis for which conventional therapy was ineffective.
Case Description/Methods: A 54-year-old male with a past medical history of chronic kidney disease and anabolic steroid use presented to the GI lab for open access colonoscopy due to progressive severe rectal pain for 2 months associated with intermittent rectal bleeding. His vital signs and physical exam were normal. One day prior to presentation, he had unremarkable CBC, CMP, INR, CRP, ESR, amylase, and lipase. CT A/P with contrast showed wall thickening and edema involving rectosigmoid region with surrounding stranding suggestive of colitis and proctitis. Splenic enlargement (16.3 cm) and splenic varices without obvious evidence of liver cirrhosis were noted. Colonoscopy showed severely inflamed and dark rectosigmoid mucosa with induration and friability (F**igure** A), with a normal-appearing mucosa above 30 cm from the anus. Biopsies were obtained. Stool culture, ova, parasites, c. difficile, calprotectin, and WBCs were negative. STI testing was negative. Biopsies revealed changes suggestive of ischemia. Hospital admission was needed for pain control. Colorectal surgery was consulted, and a repeat flexible sigmoidoscopy revealed unchanged mucosal abnormalities. Extensive coagulopathy workup was nonrevealing. Despite completing a week of intravenous antibiotics, and multiple sessions of hyperbaric oxygenation therapy, he remained symptomatic and was discharged with pain management. A repeat CTA A/P revealed worsening circumferential wall thickening of the rectosigmoid colon compatible with ischemia, prominent pelvic varices, and enlarged inferior mesenteric vein (IMV), which were thought to be related to arteriovenous (AV) shunt (**Figure B**). IR performed visceral angiography that showed AV malformation of the inferior mesenteric artery to the IMV (**Figure C**). Both embolization and surgical intervention were offered; however, he opted for conservative management. Several months after presentation, he has maintained bowel function and continues to be on long-term opioid therapy for pain control.
Discussion: AVM is a rare cause of ischemic colitis, and presentation tends to be insidious. This case highlights the importance of obtaining vascular imaging in atypical cases of colonic ischemia as management would differ significantly.



[2008] **Figure 1.** 1a. A colonoscopy showing severely inflamed and dark rectosigmoid mucosa with induration and friability. Figure 1b. A coronal CT abdomen/pelvis, arterial phase, depicts an increased number of enlarged vessels (red star) superior to a thick-walled rectum (black arrow). These vessels represent the hypertrophied inferior mesenteric artery (red arrow) and its rectal branches. Early filling of an enlarged inferior mesenteric vein (blue curved arrow). Note: enlarged spleen (yellow star) likely related to the high flow state caused by the rectal vascular malformation (AVM), as portal pressures are normal. Aorta (black star). Figure 1c. Selective inferior mesenteric artery (IMA) digital subtraction angiography (DSA), frontal coned down view of the pelvis. The IMA (red arrow) is the main feeder artery to the rectal AVM nidus (red star), which is a complex tangle of enlarged vessels at the rectum. Early filling of an enlarged inferior mesenteric vein (IMV) (blue curved arrow) noted on this conventional angiogram indicating that IMV is the main draining vein.

S2009

Chronic Diarrhea Due to *Campylobacter* Infection in an Immunocompetent Host: A Case Report

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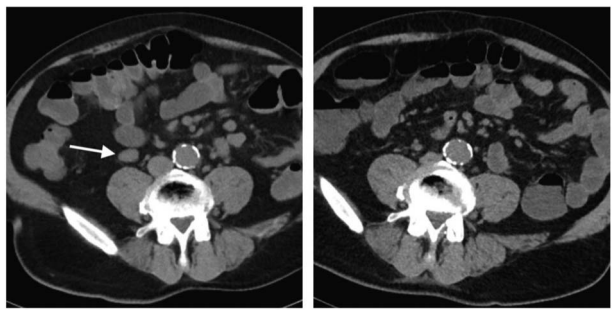
[1]Kirk Kerkorian School of Medicine at UNLV, Las Vegas, NV; [2]VA Southern Nevada Health Care System, Las Vegas, NV.

Introduction: Campylobacter infection is a foodborne illness transmitted by ingestion of contaminated food or water. It is responsible for roughly 1.5 million infections annually in the U.S. Typical symptoms include acute diarrhea (< 2 weeks) that can be bloody or non-bloody, periumbilical pain, fever, and body aches. The enteritis is often self-limited in immunocompetent hosts. Subacute or chronic diarrhea can be observed in immunocompromised patients, but rarely in the immunocompetent host.
Case Description/Methods: A 58-year-old male with a history of Korsakoff syndrome and anoxic brain injury was admitted with chronic diarrhea of 2 months, severe metabolic acidosis and acute kidney injury. Patient had 5 to 6 episodes of large volume watery diarrhea daily. There was serum leukocytosis with 17.2 K/mcL. Fecal immunochemical test was negative for blood. Stool culture was positive for Campylobacter antigen. CT abdomen showed numerous mildly enlarged mesenteric root lymph nodes without pericolonic fat stranding (**Figure**). Serum and stool inflammatory markers were elevated (**Table**). Stool testing for other infectious agents was unremarkable. Diarrhea did not improve with fasting. Patient did have underlying chronic pancreatitis due to prior alcohol abuse, but had been abstinent for 3 years. He was not previously on pancreatic enzyme and vitamin supplementation, which was started but did not improve his symptoms. Screening for celiac disease, HIV, and viral hepatitis was also unremarkable. It was concluded that in addition to chronic pancreatic insufficiency, Campylobacter was the culprit for his chronic diarrhea, which was treated with IV azithromycin for 10 days. Patient's diarrhea resolved after completion of antibiotics. Repeat CT abdomen showed near-complete resolution of previously seen lymphadenopathy.
Discussion: Chronic diarrhea due to Campylobacter infection is rare in immunocompetent hosts. Long-term Campylobacter colonization has been described in immunocompromised hosts. Colonization, or chronic campylobacteriosis, is confirmed by persistent Campylobacter-positive feces in the setting of prolonged diarrhea. It is typically treated with oral azithromycin or ciprofloxacin for 3 days. However, our patient required an intravenous administration and longer course of treatment since his symptoms were refractory to oral antibiotics. This is an uncommon case of complicated Campylobacter infection resulting in chronic diarrhea in an immunocompetent patient.



[2009] **Figure 1.** Left: CT Abdomen without contrast (axial) showing mesenteric lymphadenopathy, lymph node measuring 1.2cm x 2.4cm (arrow). Right: Resolution of lymphadenopathy after completion of 10-day course of azithromycin.

Table 1. Stool and serum laboratory profile of the patient

Test	Result	Reference Range
Stool Studies		
Stool culture	Campylobacter sp	Negative
WBC	Positive	Negative
Calprotectin	447	Normal < 50 mcg/g
Pancreatic Elastase 1	< 15	Normal >200 mcg/g
C. Difficile PCR	Negative	Negative
Giardia antigen	Negative	Negative
Fecal sodium	114	N/A
Fecal potassium	14.0	N/A
Fecal chloride	73	N/A
Fecal Osmolality	437	275-295 mOsm/kg*
Fecal Osmotic Gap	34	Secretory diarrhea: < 50 mOsm/kg Osmotic diarrhea: >75 mOsm/kg
Fecal Fat (Qualitative)	Abnormal (positive)	Normal
Ova and parasites	Negative	Negative
Serum Studies		
WBC	17.2	4.8-10.8 K/mcL
TSH	1.5	0.55-4.78 uIU/mL
ESR	62	< 20 mm/hr for men over 50 years
CRP	95	0-7.5 mg/L
Lipase	7	22-51 U/L
HIV 1 and 2 antibody	Nonreactive	Nonreactive
Celiac panel (tTg IgA)	Negative	Negative
Total IgA	293	47-310 mg/dL
Blood cultures	Negative	Negative

*Stool osmolality greater than 290 and up to 600 are common because of bacterial metabolism of fecal carbohydrate during storage of the stool sample.
Abbreviations: WBC: white blood cells, CRP: C-reactive protein, HIV: human immunodeficiency virus, tTg: tissue transglutaminase, IgA: Immunoglobulin A.

S2010

Colonic Carcinoma With Neuroendocrine Features Diagnosed in the Setting of *Enterococcus faecalis* Bacteremia, Endocarditis and Embolic Phenomenon

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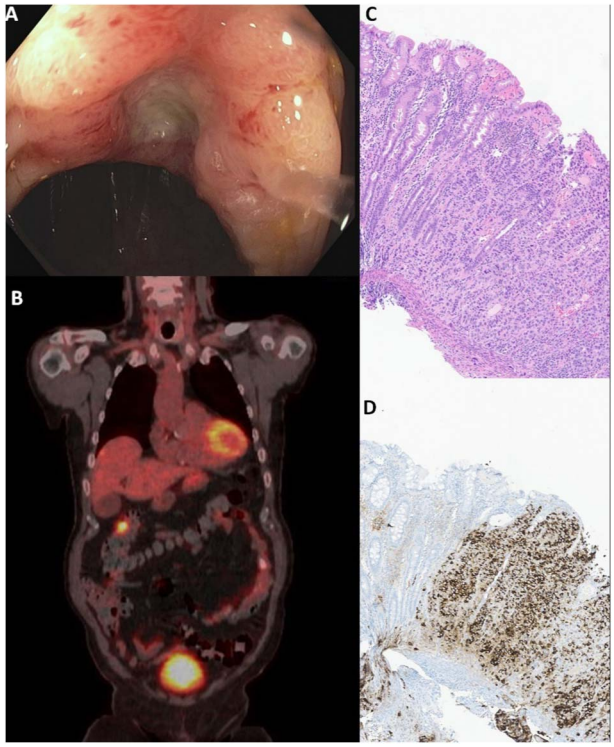
Introduction: A 77-year-old man with a history of hypertension, hyperlipidemia, prior ischemic stroke, and chronic back pain presented with fever and confusion 3 days after undergoing a lumbar epidural steroid injection.

Case Description/Methods: A 77-year-old man with a history of hypertension, hyperlipidemia, prior ischemic stroke, and chronic back pain presented with fever and confusion 3 days after undergoing a lumbar epidural steroid injection. Multiple sets of blood cultures grew Enterococcus faecalis. His CRP was elevated at 86. An MRI scan of the spine was negative for epidural abscess. Brain MRI revealed multiple acute embolic infarcts. Transthoracic echocardiography revealed a mobile 8mm vegetation, and transesophageal echocardiography confirmed mitral valve endocarditis. CT of the abdomen and pelvis revealed colonic wall thickening at the hepatic flexure with coexistent fat stranding and lymphadenopathy. Subsequent colonoscopy revealed a 1 cm solitary cratered ulcer with heaped up borders at the hepatic flexure (**Figure** A). Histopathology demonstrated a high-grade carcinoma immunophenotypically positive for colonic (CDX2+, SATB2+, CK20+, CK7-) and neuroendocrine differentiation (chromogranin+, synaptophysin+) (**Figure** C, D). The favored diagnosis was colonic high-grade neuroendocrine carcinoma, large cell type. PET/CT Dotatate scan was negative for uptake at the hepatic flexure reflecting poor differentiation of the carcinoma and lack of somatostatin receptors expression. Subsequent PET/CT FDG scan was positive reflecting high FDG avidity in the identified hepatic flexure hypermetabolic lesion, surrounding lymph nodes, and numerous hepatic lesions (**Figure** B). The patient was treated with antibiotics for endocarditis and started on carboplatin and etoposide.

Discussion: Classically, *Streptococcus bovis* bacteremia and endocarditis are associated with colorectal cancer. Evidence is accumulating for a link between Enterococcus faecalis, a component of gut flora, and colorectal adenocarcinoma. The biopsies of the ulcerated mass at the hepatic flexure, in our patient with Enterococcus faecalis bacteremia and endocarditis, suggested a primary colonic neuroendocrine carcinoma, large cell type. Neuroendocrine tumors of the colon arise from enterochromaffin cells in the crypts of Lieberkuhn. Colon carcinoid tumors are rare, with an annual incidence of approximately 0.2 per 100,000. Most neuroendocrine tumors are asymptomatic at the time of diagnosis and often present with metastatic disease.



[2010] **Figure 1. A**: Colonoscopy revealing a 1 cm solitary cratered ulcer at the hepatic flexure. B: PET/CT FDG scan showing high FDG avidity at hepatic flexure. C: Histopathology H&E stain showing poorly differentiated carcinoma. D: Histopathology chromogranin stain positivity confirming neuroendocrine differentiation.

S2011

Disseminated Histoplasmosis Involving the Whole Colon: It's Ulcers All the Way Down

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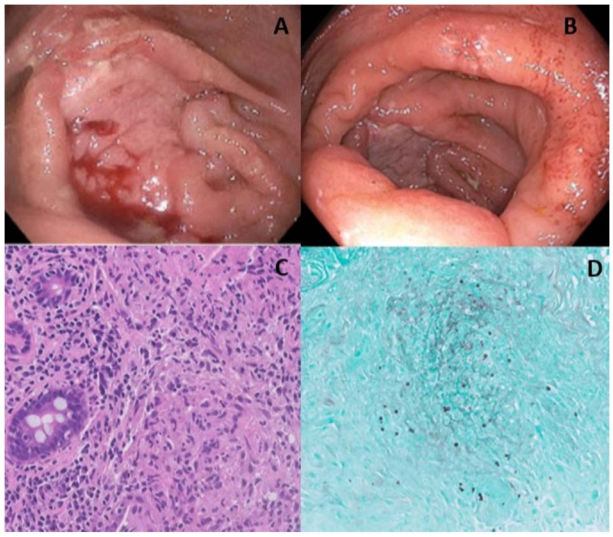
Introduction: Histoplasma capsulatum is a dimorphic fungus endemic to river valleys of Eastern and Central U.S. that is spread via inhalation of spores from soil contaminated by bird or bat droppings. Disseminated Histoplasmosis (DH) spreads through the reticuloendothelial system via parasitized macrophages and can cause severe infection in immunocompromised patients with AIDS, hematologic malignancies, transplant recipients, and those receiving tumor necrosis factor (TNF)-alpha inhibitors or chronic corticosteroids. Gastrointestinal involvement in DH is frequently seen, but it is not uncommon for patients to be asymptomatic. We present a case of DH with pan-colonic ulcerations in a renal transplant patient.
Case Description/Methods: A 83-year-old male with deceased donor renal transplantation on immunosuppression therapies presented with profound weakness. He was restarted on hemodialysis one month prior for declining renal allograft function which had been stable for the past 2 decades. Initial workup showed pneumonia on imaging, elevated procalcitonin, alkaline phosphatase, and pancytopenia. He developed hematochezia with worsening anemia which prompted colonoscopy that revealed deep and innumerable ulcers measuring greater than one cm in the whole colon. One large ulcer with a visible vessel near the hepatic flexure was treated with epinephrine, electrocautery, and endoclip for hemostasis. Ulcer biopsy revealed granulomatous inflammation with fungal yeast forms morphologically compatible with Histoplasma by Grocott's Methenamine Silver (GMS) staining. Bone marrow pathology was suggestive of fungal infiltration, but marrow and blood cultures were negative. Family revealed he lives in an old mold infested home and has history of visiting caves. Treatment was initiated with liposomal Amphotericin B then transitioned to oral Itraconazole. He has continued to make a strong recovery and remains on dialysis (**Figure**).
Discussion: For healthy individuals, exposures to Histoplasma generally occur as asymptomatic to self-limited pulmonary infection. Disseminated Histoplasmosis is often undiagnosed and carries high mortality if untreated. These patients usually had past exposures with dormant inoculation that is reactivated after immunosuppression. GI involvement is common but can be non-symptomatic or with only vague abdominal complaints from colonic fungal invasion. Suspicion of DH should be met with a low threshold for endoscopic evaluation and requires tissue biopsy for diagnosis.



[2011] **Figure 1.** (A) Large ulcer in the cecum which was biopsied. (B) Numerous ulcers seen diffusely throughout the colon. (C, D) H&E and Grocott's Methenamine Silver (GMS) stain of colonic mucosa with patchy ulceration and granulomatous inflammation including fungal yeast forms, morphologically compatible with Histoplasma.

S2012

Diffuse Large B Cell Lymphoma Presenting as a Single Colon Polyp With Concurrent Hepatitis B Virus Infection

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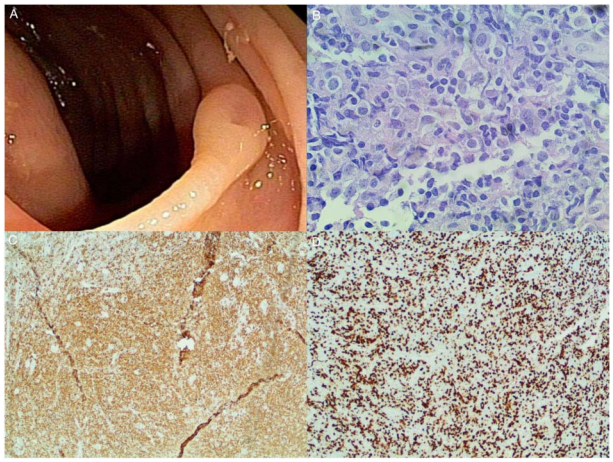
Introduction: Primary colonic lymphomas are exceedingly rare accounting for 1% of gastrointestinal lymphomas and 0.2-0.5% of all colorectal malignancies. Diffuse large B-cell lymphoma (DLBCL) is strongly associated with hepatitis B virus (HBV) with a prevalence of 30.2%, however, less is known about its impact on overall disease prognosis. We report a case of colonic DLBCL localized in a polyp in an HBV-infected patient.
Case Description/Methods: A 50-year-old Asian female with history of untreated HBV infection presented for a screening colonoscopy. She denied any fever, night sweats, fatigue, weight loss, or changes in bowel habits. Physical exam and laboratory workup were largely unremarkable. She was positive for hepatitis B e antigen (HBeAg) and hepatitis B surface antigen (HBsAg), and HBV DNA was 731 IU/ml. Colonoscopy revealed a single sessile 5 mm polyp in the descending colon that was completely resected using a hot polypectomy snare (**Figure** 1A). Histopathological evaluation revealed the presence of atypical lymphoid cells with prominent nucleoli (**Figure** 1B). Immunohistochemical analyses revealed lymphocytic cells positive for CD20, PAX5, CD79a, BCL2, MUM1, CD30, and negative for Cyclin D1, BCL6, CD10, ALK, and cMYC (**Figure** 1C, 1D). She was started on anti-HBV treatment with tenofovir 300 mg daily. A PET scan and bone marrow biopsy and aspirate were negative, consistent with diagnosis of stage I DLBCL. Patient declined chemotherapy. A repeat PET scan and colonoscopy 2 years later did not show any recurrent disease.
Discussion: Gastrointestinal DLBCL is extremely rare accounting for 1.4% of Non-Hodgkin Lymphomas. It most commonly arises in the stomach, followed by the small intestine and colon. Primary colonic DLBCL usually presents as a fungating mass in the ileocecal region and rarely as a benign-appearing colonic polyp. It is plausible that concurrent HBV infection was associated with the unusual presentation of DLBCL in this asymptomatic patient. This reinforces the importance of a low threshold for endoscopic sampling of any mucosal abnormality during routine screening colonoscopy in HBV-positive patients. This case highlights that complete endoscopic or surgical resection in an early-stage disease could be curative. The impact of concurrent HBV infection on the pathogenesis, disease course, and prognosis of colonic DLBCL remains unclear. It is possible that anti-HBV treatment, especially in HBeAg and HBsAg positive cases, may lead to improved outcomes.



[2012] **Figure 1.** (A) Endoscopic image showing a 5 mm sessile polyp in the descending colon. (B) Large atypical lymphoid cells with pleomorphic nuclei, vesicular chromatin, and distinct central nucleoli (H&E, 400x magnification). (C) Atypical lymphoid cells staining positive for CD20 (40x magnification). (D) Atypical lymphoid cells staining positive for MUM1 (40x magnification).

S2013

Distal Intestinal Obstruction Syndrome in Cystic Fibrosis

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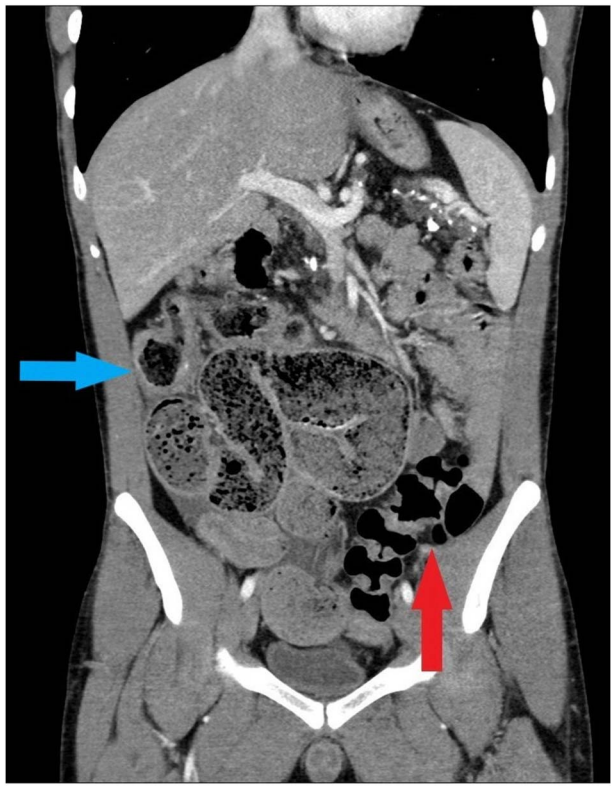
Introduction: Cystic fibrosis (CF) is regarded as a lung disease as the primary morbidity and mortality are secondary to pulmonary related complications. However, gastrointestinal diseases are an increasingly important cause of morbidity in these patients due to expanding survival. These complications require special management consideration as they are unique to CF patients, requiring appropriate diagnosis and treatment. Our case illustrates distal intestinal obstruction syndrome (DIOS) which is a CF specific gastrointestinal complication.
Case Description/Methods: Our patient is a 23-year-old male with CF (Homozygous F508del) who presented to the emergency department due to right sided abdominal pain and constipation described as no bowel movements (BM) for the last 4 days. Normal bowel habits were daily and well formed (Bristol Stool Score 4). He was compliant with medications including Elexacaftor/ Ivacaftor/ Tezacaftor as prescribed and Pancrelipase 40,000 units with 3 capsules each meal. Physical exam revealed mild tachycardia (105bpm) but the rest were normal. A right lower quadrant lump, tender on palpation but no guarding noted was found on abdominal exam. Laboratory parameters were normal. CT abdomen performed showed extensive small bowel fecalization throughout the distal ileum extending to the ileocecal valve as well as stool in the proximal ascending colon. These findings are consistent with DIOS unique to cystic fibrosis, characterized by acute complete or incomplete ileocecal obstruction. Unlike constipation, there is no distal colon fecal burden extending proximally. Patient was treated conservatively with 4L of PEG-ELS with successful bowel movements and complete symptom resolution (**Figure**).
Discussion: DIOS occurs in 10 to 47 percent of CF patients. Risk factors include homozygous F508del genotype (present in our patient), history of meconium ileus, previous DIOS and non-adherence to pancreatic enzyme replacement therapy. Several mechanisms for DIOS have been suggested including insufficient pancreatic enzyme activity, dysmotility as well as abnormal mucin, water and electrolyte composition of intestinal contents. The condition is largely unknown to primary care and emergency department clinicians along with gastroenterologists with limited CF experience. As this condition is recurrent, it is imperative for early recognition and medical treatment to prevent unnecessary surgical laparotomy and decompression.



[2013] **Figure 1.** Image A – Stool burden noted proximal at distal ileum, Ileocecal valve (Blue Arrow) and proximal ascending colon. Decompressed distal colon (Red Arrow).

S2014

Disseminated Histoplasmosis Presenting as Right Colon Lesions in HIV-Negative Patients: Report of Two Cases

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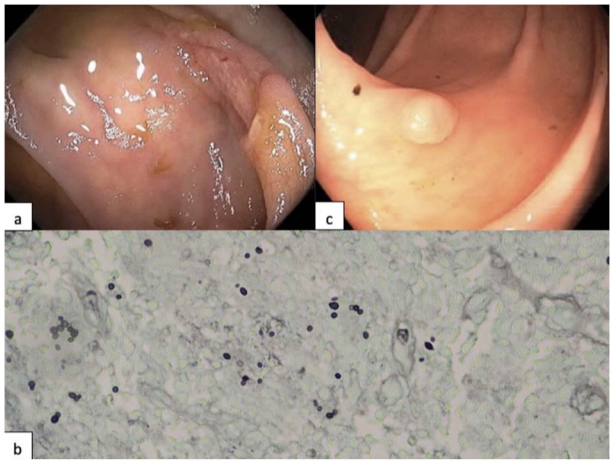
Introduction: Histoplasma capsulatum is the most common endemic mycosis in the gastrointestinal tract of immunocompromised hosts. However, it can also present in immunocompetent patients. Terminal ileum and cecum are most commonly affected, recognized on endoscopic examination as inflammation, ulcerated lesions, or polypoid masses. In most patients, gastrointestinal manifestation takes a subclinical disease course. We present 2 cases of immunocompetent patients with colon lesions attributed to disseminated histoplasmosis.
Case Description/Methods: First case is a 62-year-old African American woman admitted to the hospital due to abdominal pain, weight loss and poor oral intake. She was found to be anemic. CT revealed a large retroperitoneal mass with central necrosis suspicious for malignancy. Colonoscopy revealed a cecal ulcer (**Figure A**) with pathology reporting mucosal ulceration associated with granulomatous inflammation. GMS and PAS fungal stain showed small ovoid yeast forms, morphologically compatible with histoplasmosis (**Figure B**).Biopsy of the retroperitoneal mass was also positive for histoplasma. Second case is a 54-year-old Hispanic man admitted to the hospital with fluid overload secondary to acute renal failure attributed to post-infectious glomerulonephritis. He was also found to have anemia. Colonoscopy showed a 6 mm polyp in the ascending colon removed by cold snare technique (**Figure C**). Pathology reported polyp fragment with macrophages and numerous 2-4 micron non-budding yeast forms best seen on GMS stain, most consistent with histoplasmosis. CT scan showed prominent retroperitoneal lymphadenopathy. Both our patients were started in itraconazole and are being closely followed by the ID service.
Discussion: Disseminated histoplasmosis is usually seen in immunocompromised patients such as those with HIV and medication-induced immunosuppression. GI involvement and symptoms can be diverse. Our first patient presented with a large retroperitoneal mass and cecal ulcer causing her abdominal discomfort. Second patient was much more subtle as histoplasmosis presented as a polypoid lesion. Both patients presented with significant anemia, which prompted endoscopic evaluation. Although the diagnosis of histoplasmosis in immunocompetent patients usually requires a high index of suspicion, gastroenterologists should be familiar with its variable presentations in the GI tract.



[2014] **Figure 1.** a) Histoplasma presenting as cecal ulcer. b) GMS stain showing Histoplasma. c) Polypoid lesion positive for Histoplasma.

S2015

Cowden Syndrome: An Enigmatic Disease With Many Faces

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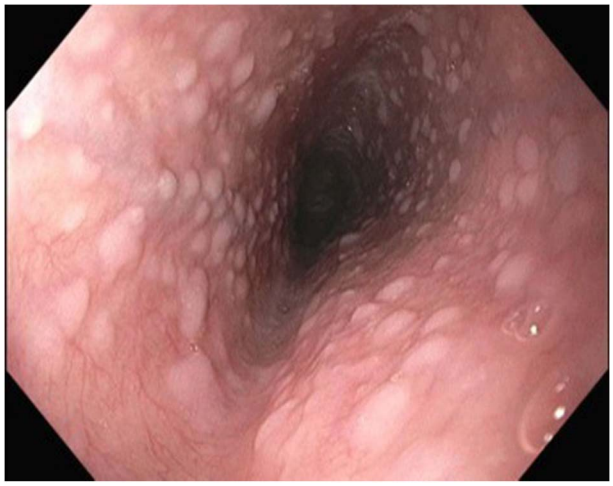
Introduction: The *phosphatase and tensin homolog PTEN* hamartoma tumor syndrome is a hereditary cancer syndrome associated with mutations of the *PTEN* gene on chromosome 10. Cowden syndrome (CS) is the most common phenotype. We present the case of 34-year-old male found to have extensive esophageal glycogenic acanthosis and numerous colon polyps subsequently found to have CS.
Case Description/Methods: A 34-year-old Hispanic male presented to clinic for evaluation of iron deficiency anemia. His medical history was notable for a non-toxic multinodular goiter and a cerebellar lesion on imaging. He was macrocephalic on physical examination. Esophagogastroduodenoscopy (EGD) revealed extensive glycogenic acanthosis throughout the esophagus (**Figure**). Duodenal and gastric biopsies were normal. Colonoscopy revealed 37 diminutive sessile polyps. Histology showed these to be hyperplastic polyps with lymphoid follicles. Considering these findings, a genetics consult was placed. The patient was found to be positive for genetic change in the PTEN gene confirming our suspicion of CS. His cerebellar lesion was later confirmed to be a gangliocytoma; a CNS lesion strongly associated with CS. A small bowel video capsule endoscopy was later completed and found to be unremarkable. Further work-up for anemia is underway.
Discussion: CS is a rare autosomal dominant disorder characterized by multiple hamartomas and hyperplastic lesions in the mucous membrane, skin, GI tract, thyroid, and brain. It has an estimated incidence of 1 in 250,000 people. Diffuse glycogenic acanthosis and gastrointestinal polyposis are characteristic features of CS; seen in close to 80% and 65-93%, respectively. It was previously believed that CS-associated polyposis did not confer an increased risk of colorectal cancer (CRC); however, recent literature reports the risk of malignancy can reach 10-18%. Our patient had many features suggestive of CS including macrocephaly, cerebellar gangliocytoma, extensive glycogenic acanthosis, and numerous colon polyps. He will continue to undergo surveillance for CRC as well as non-GI malignancies including thyroid, skin, and renal. While a mutation of the PTEN gene was found, only 40-60% of patients have an identifiable mutation on genetic testing; as such, recognition of physical manifestations and endoscopic findings is critical to diagnosis. Esophageal glycogenic acanthosis is often a benign finding on EGD; however, its diffuse presence in conjunction with colonic polyposis should raise high suspicion for CS.



[2015] **Figure 1.** Diffuse glycogenic acanthosis throughout entire esophagus.

S2016

Constipation Then Colectomy: A Case of Loperamide-Induced Ogilvie Syndrome

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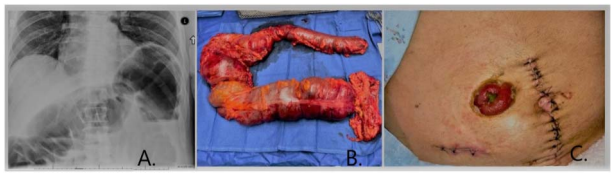
Introduction: Acute colonic pseudo-obstruction or Ogilvie syndrome occurs with colonic dilatation without a mechanical obstruction. We present a case of this rare entity in a middle-aged man after being inadvertently treated for infectious diarrhea with antimotility agents. After symptoms failed to improve with multiple interventions including neostigmine and endoscopic decompression, his pseudo-obstruction required a subtotal colectomy with end ileostomy.
Case Description/Methods: Our patient was a 57-year-old man who presented with abdominal pain, constipation, and nausea after treating his diarrhea with loperamide. On presentation he was hemodynamically stable and afebrile. Physical exam showed abdominal distention with mild tenderness to palpation with normoactive bowel sounds. His WBC was 6.9K/uL, Hgb 13.9 g/dL, sodium 131 mmol/L,

and potassium 3.6 mmol/L. His *Clostridioides difficile* antigen and GI pathogen panel came back negative. Other studies included a negative HIV and CMV quantitative viral load test. Initial KUB showed moderate gaseous dilation of the bowel which appeared to be mostly colon with findings secondary to ileus or possible distal colon obstruction. Over his month long hospitalization he received several interventions including a nasogastric tube for decompression and 2 rounds of neostigmine. Gastroenterology was consulted with 2 colonoscopies preformed for decompression and biopsies. Biopsies showed focal acute inflammation without psuedo-membranes, viral inclusions, ischemic changes, or evidence of chronic active colitis. Due to his malnourishment he required total parenteral nutrition. His abdominal pain, distention, and constipation persisted so general surgery was consulted who placed a cecostomy tube for drainage that failed to resolve his symptoms. Ultimately he underwent a subtotal colectomy with end ileostomy with resolution of his distention and discharged home (**Figure**).

Discussion: Loperamide inhibits colonic motility as a peripheral opioid agonist. This anti-kinetic effect is the proposed mechanisms of this man's pseudo-obstruction. Most acute pseudo-obstructions respond to medical management with neostigmine. When patients fail treatment with neostigmine and colonoscopy, a cecostomy tube can be placed for drainage. A subtotal colectomy is an intervention of last resort for these patients but necessary in our patient due to his malnutrition that required TPN and persistent ileus.



[2016] **Figure 1.** A. Patient's initial KUB B. Operative photo of subtotal colectomy C. Patient's abdomen with surgical incision, ileostomy, and stitched up cecostomy tube opening.

S2017

Double Trouble: A Case of Co-Infection With *Campylobacter* and *Giardia* in a HIV-Positive Patient

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Introduction: Patients with immunosuppressed states such as uncontrolled HIV are at increased risk for opportunistic infections including acute infectious diarrhea. Here, we present a case of a noncompliant HIV patient who presented with a complaint of acute diarrhea with resulting weight loss. Work-up was significant for co-infection with giardia and campylobacter as a result of receptive anal sexual intercourse.
Case Description/Methods: A 45-year-old transgender male to female patient with a past medical history of poorly controlled HIV infection not actively on antiviral therapy and chronic Hepatitis B (HBV) infection presented with initial complaint of acute diarrhea for one week with accompanying weight loss. The patient concurrently complained of a diffuse, painful, pruritic rash for 5 days. A thorough history revealed the patient had just returned from Miami, where she reported multiple sexual partners with recent unprotected oral and anal intercourse. On initial presentation, the patient was tachycardic and febrile to 104.8, with generalized abdominal tenderness and a diffuse macular rash involving scalp, torso, genitals, and extremities, including palms and soles. The patient was admitted and started on acyclovir, vancomycin and ceftriaxone. A comprehensive stool panel was positive for both campylobacter and giardia. The patient was also noted to have CMV viremia, a HIV viral load of 38,000, and a positive rapid plasma reagin. The infectious disease team was consulted and the patient was treated with a single dose of tinidazole and 2 doses of metronidazole followed by a 7-day course of ciprofloxacin. Her acute diarrhea resolved, at which point she restarted antiretroviral therapy, and completed a 14-day course of penicillin for her syphilis. She was discharged home with close follow up with her infectious disease specialist.
Discussion: This case highlights the increased risk of opportunistic infections in the setting of poorly controlled HIV and unprotected sexual intercourse as highlighted by this patient's co-infection with both giardia and campylobacter. Campylobacter and giardia are 2 commonly associated foodborne illnesses, however they can be transmitted via unprotected oral-anal sex. In addition to compliance with HIV treatment, patients should consider barrier methods during receptive sex to prevent fecal-oral transmission. In sum, our case highlights the importance of keeping a broad differential of infectious causes of diarrhea, especially in the immunocompromised population.

S2018

Concurrent CMV Colitis and GI Amyloidosis as Initial Presentation of Multiple Myeloma: A Case Report

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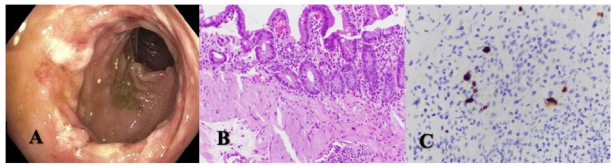
[1]University of Miami, Miller School of Medicine, Miami, FL; [2]Miller School of Medicine, University of Miami, Miami, FL.

Introduction: Prior associations with Cytomegalovirus (CMV) colitis and multiple myeloma (MM) or amyloidosis are only described in immunocompromised patients undergoing treatments like transplantation, monoclonal antibodies, or chemotherapy. The concurrent presentation of gastrointestinal (GI) amyloidosis with CMV colitis is rarely reported and should be considered more readily in the hospital.
Case Description/Methods: 67-year-old male was admitted to the hospital with bilateral lower extremity deep vein thromboses after transurethral resection of the prostate 8 days prior. He was started on anticoagulation, but due to onset of hematuria, anticoagulation was stopped and an IVC filter was placed. The patient then developed bright red blood per rectum with diarrhea and GI was called. On exam, vitals were stable, and abdomen was non-distended and non-tender. Digital rectal exam showed brown stool. A colonoscopy displayed discontinuous areas of ulcerated, erythematous mucosa with loss of vascular pattern (**Figure A**). A histologic examination showed terminal ileal mucosa with lymphoid aggregates (**Figure B**), positive Congo red stain with apple green birefringence and cytomegalovirus inclusions in the colon (**Figure C**). Subsequent immunology testing demonstrated elevated free lambda light chains with a free kappa to lambda ratio of 0.019. A bone marrow biopsy confirmed lambda restriction and >20% CD138-positive plasma cells, consistent with MM. The patient was started on valganciclovir but showed no improvement of symptoms, which was attributed to his confounding amyloidosis. The patient's clinical status continued to worsen, and he ultimately expired from cardiac causes.
Discussion: It is noteworthy that CMV colitis occurred concurrently with amyloidosis. Immune dysfunction and hypogammaglobinemia in amyloidosis lead to susceptibility to infection, but the inciting organisms usually are *H. influenzae*, *S. pneumoniae*, and *E. coli*. The use of immunosuppressing therapies such as transplantation or chemotherapy increases the likelihood of opportunistic infections. Besides these scenarios, CMV has rarely been reported in patients with amyloidosis or MM. We suggest GI amyloidosis and CMV should be considered and treated rapidly in patients presenting with non-specific GI symptoms. However, our case also highlights the difficulty in measuring effectiveness of antiviral treatment for CMV in GI amyloidosis due to overlap of symptoms between both conditions.



[2018] **Figure 1.** A) skiped areas of ulcerated, friable colon. B) immunohistochemistry CMV viral inclusions, C) Colonic epithelium with amyloidosis.

S2019

Diagnostic Significance of Rare Colorectal Perineurioma Found on Colonoscopy: A Case Report

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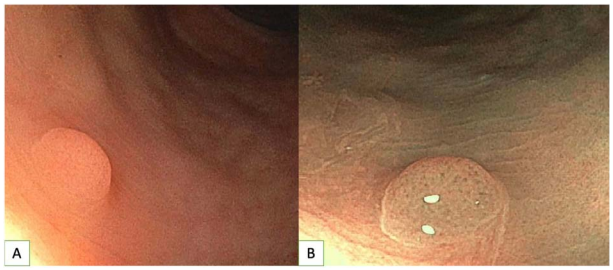
Introduction: Perineuriomas are benign spindle cell neoplasms of the peripheral nerve sheath which seldomly involve the GI tract. Colorectal perineuriomas have an incidence of 0.1%-0.46% of all colonic polyps, usually occurring in the sigmoid colon and rectum, and are often diagnosed incidentally on routine screening colonoscopy. They are not associated with neurofibromatosis syndromes (NF1-2) and require no additional followup. Herein, we describe a case of colonic mucosal perineurioma in a patient referred for colonoscopy after a positive gFOBT.
Case Description/Methods: A 57-year-old male with hypertension and dyslipidemia presented to the GI clinic after a positive gFOBT. He was asymptomatic and physical examination was unremarkable. Laboratory evaluation showed mild anemia with Hgb of 13.5 g/dL and a low-normal MCV of 80.1 μm^3. Iron studies were normal. Colonoscopy revealed a 2-mm sessile rectosigmoid polyp (**Figure**), which underwent cold snare polypectomy with histopathology notable for bland spindle cells with small elongated nuclei and imperceptible cell borders. No significant nuclear atypia or mitotic activity was identified. Immunohistochemistry (IHC) showed focal epithelial membrane antigen (EMA) staining of stromal cells; S100 stain was negative. These findings were consistent with perineurioma. Remainder of colonoscopy only showed multiple subcentimeter tubulovillous and tubular adenomas of the right colon.
Discussion: Colorectal perineuriomas typically appear as small, solitary sessile polyps less than 6 mm in diameter (median 4 mm). Histologically, they appear as uniformly elongated spindle cells with rare mitotic activity. IHC shows diffuse, strongly positive staining of spindle cells with GLUT1 and claudin 1 and focal or faintly positive EMA staining. Two of the 3 positive stains generally support the diagnosis. Colorectal perineuriomas lack S100 protein expression unlike other soft tissue neuromas such as schwannomas and neurofibromas. This case highlights the importance of correct diagnosis in order to avoid overtreatment, as these may resemble malignant neoplasms such as gastrointestinal stromal tumors which are histologically similar but stain positive for c-kit/CD117 and DOG-1. These tumors are more common in females, with a median age of 51. They do not recur after excision, and given their benign nature, do not require surveillance after polypectomy.



[2019] **Figure 1.** A. Colonoscopy showing a 2-mm sessile rectosigmoid polyp, confirmed as a perineurioma on pathology B. Closer image of the same perineurioma, visualized using Narrow Band Imaging (NBI).

S2020

Could Sigmoid Diverticulitis, Drug-Induced Liver Injury and Drug-Induced Pancreatitis Occur Simultaneously?

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Introduction: Sigmoid diverticulitis, a common complication of diverticular disease, presents with abdominal pain, fever and elevated inflammatory markers. The prevalence is 10%-25%. Drug induced pancreatitis has a prevalence of 0.1-2% of all cases. It is often difficult to diagnose. Drug induced liver injury (DILI) is an uncommon adverse event. It is one of the common reasons for acute liver failure in the west. It is rare to see all these pathologies simultaneously. We present an interesting case with these pathologies.
Case Description/Methods: 72-year-old woman with past medical history significant of inflammatory arthritis and diverticulosis started on sulfasalazine. She began to have symptoms of fatigue and abdominal pain with bloody diarrhea few days after initiation of sulfasalazine. As per PCP recommendations patient had blood tests done which showed elevated- Lipase (600U/l), ALP (380U/L), AST (271U/l) and ALT (251U/L). Given these findings and ongoing abdominal pain, she was referred to the emergency department. Computerized tomography (CT) of the abdomen and pelvis with intravenous contrast showed evidence of sigmoid diverticulitis, normal pancreas, no biliary dilation and a simple liver cyst. On conservative management with intravenous piperacillin-tazobactum and intravenous fluids, she improved and was discharged home with oral antibiotics. Sulfasalazine was added to her allergy list. She recovered without complications and liver enzymes trended downwards at follow up.
Discussion: Diverticulitis occurs because of obstruction of diverticulum, chronic inflammation, alterations in the gut microbiome, micro perforations and alterations in neuromusculature. The gold standard for diagnosis is multidetector CT. Drug induced pancreatitis can be proposed in the presence of an offending agent when common etiologies for acute pancreatitis have been ruled out. Criteria for acute pancreatitis should be met and re challenge with supposed offending drug could be attempted. DILI can be either predictable or idiosyncratic. Pathogenesis remains unknown. Most cases resolve after withdrawal of the agent. Patient presented with atypical abdominal pain for acute pancreatitis, elevated lipase and liver enzymes with recent initiation of sulfasalazine, which is known to cause pancreatitis. CT abdomen and pelvis showed sigmoid diverticulitis. On literature review, we could not find simultaneous presentation of diverticulitis, pancreatitis and drug induced liver injury.

S2021

Dilemma of a Rectal Mass

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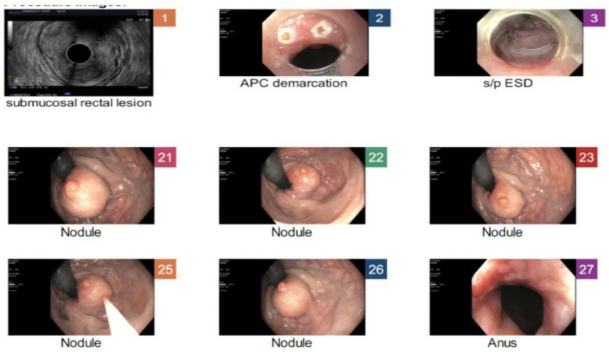
Introduction: Mucosal prolapsing polyps of the colon are uncommon findings during colonoscopy that are often misdiagnosed as malignant lesions that many times lead to unnecessary endoscopic and surgical resection. At times rectal prolapse/ mucosal prolapse syndrome can present as rectal submucosal mass similar to one another. Herein we present a case of a 63-year-old male with rectal prolapse that mimicked Submucosal rectal mass.
Case Description/Methods: A 63-year-old male with prior medical history of hypertension, hyperlipidemia, obesity, treated Heliobacter pylori, hemorrhoids presented to the gastroenterology clinic due to 3-month history of dizziness, abdominal pain and bright red blood per rectum. Initial vitals were stable except for tachycardia. Physical examination was unremarkable except for external rectal hemorrhoids that were appreciated. Labs were also unremarkable on admission except for Normocytic anemia. Patient was planned and taken for colonoscopy which had poor bowel preparation, revealed large rectal mass, 2 small polyps in ascending and transverse colon which were resected. Patient was planned for flexible sigmoidoscopy and lower endoscopic ultrasound evaluation of rectal mass which revealed a hypoechoic, submucosal lesion measuring 14mm by 7mm. Patient underwent endoscopic submucosal resection of the rectal mass and removal of lesion. Post op he had rectal pain along with hypotension, which led patient to be admitted for overnight observation. On follow up patient complained of recurrent dizziness and BRBPR, sigmoidoscopy was planned and revealed superficial mucosal ulceration which was treated with bipolar cautery. Pathology of the rectal mass revealed largely denuded benign appearing congested polyp with granulation tissue and cautery artifacts. Patient's symptoms improved on subsequent follow ups (**Figure**).
Discussion: Mucosal prolapse presents as a common underlying mechanism rectal prolapse, inflammatory polyps, solitary rectal ulcer syndrome that were previously proposed to be grouped under the umbrella term "mucosal prolapse syndrome". Mucosal prolapse can manifest as ulcerated, flat erythematous, or polypoid lesions. At times they can even mimic adenocarcinomas, adenomas both endoscopically and histologically. Most of the time rectal prolapses polyps have been seen in patients with mucosal prolapse syndrome. Thus, it is vital to differentiate and diagnose rectal prolapse versus true rectal mass in order to exclude malignancies. This will help guide management and surveillance strategy.



[2021] **Figure 1.** Nodules from Colonoscopy.

S2022

Empyema as a Rare Manifestation of Extraintestinal *Clostridium difficile*

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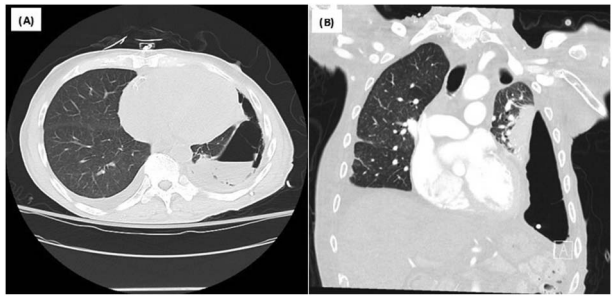
Introduction: *Clostridium difficile* is a gram-positive anaerobic bacteria that accounts for up to 25% of infectious diarrheal illnesses. Extra-intestinal C. *difficile* infection is exceedingly rare. Herein we report a case of *C. difficile* empyema.
Case Description/Methods: A 69 year-old male with past history of chronic hypoxia (on 2L) and end-stage renal disease presented with difficulty breathing. He was tachypneic but oxygen saturation >90% on 2L. On review of systems, he endorsed 3-4 loose non-bloody bowel movements daily, dysphagia to solids and significant weight loss. Chest CT revealed a loculated large left pleural effusion with enhancement consistent with empyema and near complete collapse of the left lung (**Figure**). His pleural space was accessed and brown fluid was drained. Analysis of the pleural fluid showed pH 7.20, LDH 5745 U/L and protein 3.4 g/dL consistent with an exudative effusion. It was sent for culture and grew *C. difficile* at which time he was started on intravenous metronizadole. Blood cultures did not show any growth after 48 hours and *C. difficile* stool testing was negative. CT abdomen did not show evidence of fistulous connection between the pleural space and GI tract. His dysphagia raised concerns for aspiration prompting evaluation with an esophagram, which showed oropharyngeal dysphagia. He subsequently underwent EGD which was normal. He was given intrapleural fibrinolytic therapy and had a chest tube placed to assist with drainage of his empyema. The chest tube output improved within 72 hours and pleural fluid was reanalyzed and showed marked improvement (pH 7.51, LDH 74 U/L, total protein 1.7 g/dL) and no microrganism was detected on culture. The patient was transitioned to oral 500mg metronidazole every 8 hours for a total of 4 weeks and discharged.
Discussion: *C. difficile* empyema is exceedingly rare, and most cases have been attributed to aspiration. Other possible mechanisms include introduction into the pleural space following invasive procedures, enteropleural fistula, or hematogenous spread. Given the reported history of dysphagia to solids, we believe the empyema was transmitted via aspiration. Due to the paucity of cases of *C. difficile* empyema, there is no published guideline directed therapy, however, it has been previously successfully treated with chest tube thoracostomy and metronidazole. While this infection is rare, it is important for clinicians to recognize and know how to treat.



[2022] **Figure 1.** (A) Transverse CT chest demonstrating loculated left sided pleural effusion with indwelling intrapleural catheter. (B) Coronal CT chest demonstrating loculated left sided pleural effusion and near complete collapse of left lung.

S2023

Endometrioma Presenting as a Sigmoid Colon Polyp

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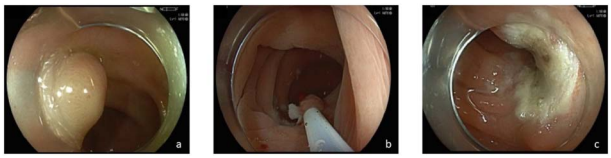
Introduction: Endometriosis refers to inflammation caused by active endometrium outside of the uterus. Colonic involvement can give rise to various complications, such as luminal narrowing, obstruction, and even perforation; all which can be avoided with endoscopic mucosal resection (EMR). Our case shows that endometrial implants in the colon can present similarly to colon cancer and should be considered as a potential etiology of findings on colonoscopy.
Case Description/Methods: A 45-year-old female (G4P3) presented with a several month history of left lower quadrant abdominal pain, bloating and multiple episodes of blood per rectum. Past medical history was significant for endometriosis with hysterectomy, tubal ligation, and idiopathic thrombocytopenic purpura. She was referred for a rectosigmoid polyp concerning for malignancy. The mass found was a firm, rubbery, 15mm, exophytic sessile polyp positioned on the acute fold of the sigmoid colon. Using an underwater technique, piecemeal EMR was performed. Argon plasma coagulation (APC) ablation was performed on residual adjacent tissue and the resection bed. Histopathology showed endometriosis involving the muscularis propria and submucosa negative for hyperplastic polyp, adenoma or malignancy. Endometriosis stain was positive for CK7 and PAX-8 and negative for CK20 and CDX-2 confirming the diagnosis. Hormone therapy was initiated and showed significant improvement in symptoms (**Figure**).
Discussion: Endometriosis can affect essentially any organ. Intestinal involvement usually presents with symptoms and gross appearance similar to many disorders including cancer or leiomyoma, such as in our case. Endometriosis usually involves serosa and subserosa. When there is deep invasion into the muscularis propria and submucosa, it can be mistaken for colon cancer, delaying and complicating diagnosis. The gold standard for diagnosing endometriosis is laparoscopy, but colonoscopy can provide direct visualization of lesions with the opportunity for EMR and confirmatory biopsy. As rectosigmoid endometriosis surgery is associated with high rates of complication when compared to other parts of the colon, EMR was preferred in our case. Hormone therapy can help prolong the recurrence interval between resection and recurrence, but has no effect on lesion size. A multidisciplinary approach to intestinal endometriomas with hormone therapy combined with EMR can lower recurrence, remove lesions completely, and help patients avoid endometrioma complications and high-risk surgical procedures.



[2023] **Figure 1.** a: Lesion development prior to EMR. b: Cap-assisted underwater technique piecemeal EMR performed using hot 20 mm and 10 mm snares. c: Lesion was completely removed, retrieved, and APC ablation was performed on residual tissue adjacent to the resection site, as well as resection bed.

S2024

Elderly Patient, Youthful Pathology: Solitary Colonic Juvenile Polyp Found in a 75-Year-Old Male

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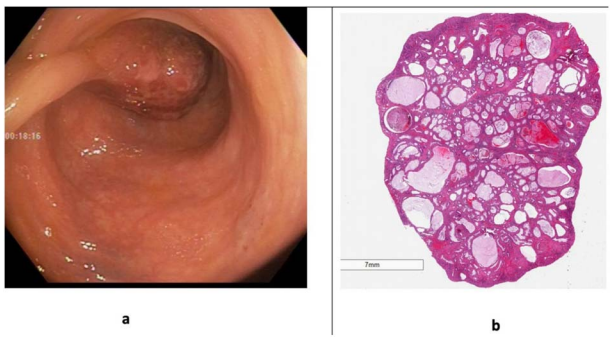
Introduction: Colonic juvenile polyps are generally found in the pediatric population. Classically, juvenile polyps (JP) are the most common polyp subtype seen in pediatric gastroenterology, accounting for approximately 80-90% of polyps in children. Generally, JP are diagnosed within the first decade of life and most common presentation is painless rectal bleeding. Other terminology used are juvenile hamartomatous polyp or retention polyps. There is no malignant potential for solitary JP and they tend to not recur.
Case Description/Methods: We present a 75-year-old male with past medical history of hypertension, diabetes and hyperlipidemia referred to gastroenterology for surveillance colonoscopy due to a history of tubular adenomas. At the pre-procedure visit, the patient was well without GI complaints such as overt bleeding, change in bowel habits or unintentional weight loss. No family history of colon cancer or polyps was reported. Physical exam and vitals were normal at the time of procedure. Colonoscopy revealed a 40mm pedunculated sigmoid colon polyp which was excised using an endoloop at the stalk base followed by hot snare polypectomy ((**Figure A**). Three other sub-centimeter sessile polyps in the rectosigmoid area were removed by cold snare polypectomy. Histopathological examination of the large pedunculated polyp was consistent with a JP(**Figure B**). Other polyps were tubular adenomas.
Discussion: Our current patient is the oldest reported case of isolated colonic JP. These polyps tend to have a common phenotypical appearance measuring around 10-30mm and roughly 90% of them are considered pedunculated. JP are ultimately defined by their distinctive histopathological features such as edematous lamina propria with inflammatory cells, cystically dilated glands that are bordered by cuboidal or columnar epithelium with reactive changes, and mucus filled glands. Fortunately for our patient, the presence of only a solitary colonic JP generally carries no known malignant potential. Juvenile polyposis syndrome (JPS) on the other hand is a hereditary condition characterized by the presence of hamartomatous polyps in the digestive tract and is known to have an increased risk of digestive tract malignancies. JPS is suspected when a patient has 5 or more juvenile polyps in the gastrointestinal tract or a juvenile polyp and a family history of juvenile polyps. A DNA test to check SMAD4 or BMPR1A gene is helpful.



[2024] **Figure 1.** (a) A 40mm polyp (Paris 0-Ip) located in the in the sigmoid colon. (b) Hamartomatous polyp has ulcerated surface with benign dilated glands.

S2025

Eosinophilic Enterocolitis Improved After Breast Reduction

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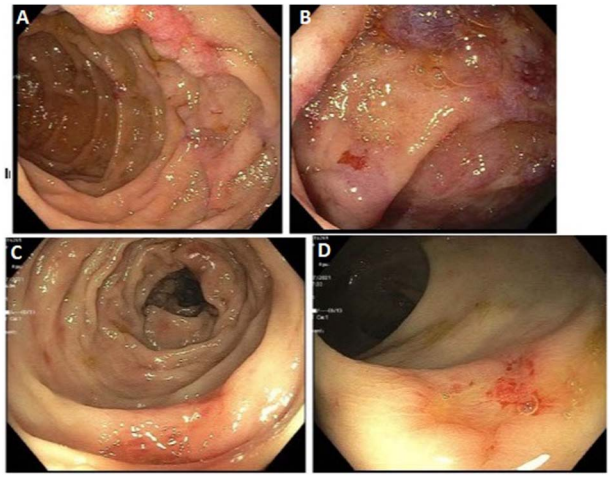
Introduction: Hypereosinophilic Syndrome (HES) is a group of disorders characterized by an accumulation of eosinophils within peripheral tissues or blood, with manifestations dependent on organ involvement. Eosinophilic gastrointestinal disorders (EGIDs) is one manifestation. In our case, it is believed that antigenic leakage from ruptured silicone breast implants was the proximate cause, as the patient had complete resolution of symptoms and normalization of labs after implant removal.
Case Description/Methods: Our patient is a 59-year-old female with a history of asthma, who presents with new-onset sharp epigastric pain worsened with oral intake and associated with diarrhea. Recent evaluation at another hospital for leg weakness revealed peripheral eosinophilia and electromyography showed chronic inflammatory demyelinating neuropathy. After a full diagnostic evaluation for HES, she was diagnosed with idiopathic HES and treated with low dose steroids, IVIG and plasmapheresis without clinical improvement. At our hospital, labs revealed a white count of 35,000/μL, eosinophil count of 21,960/mm3 and IgE of 1299 IU/mL (**Table**). A CT scan revealed descending colon wall thickening, and intracapsular rupture of the right breast implant. Enteroscopy demonstrated erosions and ulcerations of the duodenum and jejunum. Colonoscopy showed areas of focal ulcerations with surrounding inflammation separated by normal mucosa and histology showed eosinophilic infiltration throughout. Video capsule endoscopy demonstrated diffuse inflammation and ulceration of the entire small bowel. She was empirically treated for strongyloides before starting high dose prednisone therapy. A month later, her breast implants were removed elsewhere. After a short interval, she was successfully tapered off steroids and achieved resolution of both her GI symptoms and lower extremity weakness, as well as normalization of lab work (**Figure**).
Discussion: EGIDs are believed to be multifactorial with an emphasis on immunologic factors. Eosinophilic infiltration seen on biopsies and exclusion of secondary causes is required. Treatment is aimed at symptomatic improvement and removal of offending agent, as seen with our patient who experienced complete clinical resolution after removal of her silicone breast implants. Our case highlights a rare case of eosinophilic enterocolitis associated with a ruptured breast implant in an otherwise healthy patient and emphasizes the importance of remaining vigilant of all external factors that may be contributing to the disease process.



[2025] **Figure 1. A, B:** Small intestine duodenum & Jejunum. **C, D:** Colonic areas of inflammation.

Table 1. Initial labs versus labs post implant removal

	Units	Reference Labs	Initial Labs	Labs post implant removal
White Blood Count	μL	4.0 - 10.5	35 x 10^3	7.1
Hemoglobin	g/dL	11.2 - 15.7	9.6	11.2
Platelets	μL	150-400	508 x 103	369
Eosinophil #	μL	0.04 - 0.36	21,960	2.5
Eosinophils	%	0.7-5.8	61	35
IgE	IU/mL	< 100	1299	

S2026

Drug-Induced Colitis Secondary to Leflunomide

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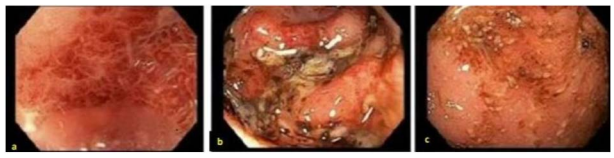
Introduction: Leflunomide is a disease modifying antirheumatic drug that works by inhibition of de novo pyrimidine synthesis resulting in antiproliferative and anti-inflammatory effects. Though diarrhea is the most common side effect of leflunomide, it is typically self-limited. Overt colitis induced by leflunomide is distinctly rare, with only a few cases in literature. We report a case of leflunomide-induced colitis that was initially misdiagnosed as ulcerative colitis.
Case Description/Methods: A 72-year-old woman was initiated on leflunomide for treatment of rheumatoid arthritis. A few weeks later, she developed chronic diarrhea with endoscopy yielding a diagnosis of ulcerative colitis. She was started on oral mesalamine and rectal hydrocortisone but continued to have symptoms, resulting in severe electrolyte abnormalities which caused ventricular tachycardia requiring hospitalization. She reported lower abdominal pain, 10-12 loose stools daily with intermittent blood, fecal urgency, and thirty-pound weight loss. Labs revealed serum C-reactive protein of 107 mg/L, fecal calprotectin of 499 μg/g, and negative Clostridium difficile toxin. Flexible sigmoidoscopy showed diffuse mucosal congestion and erythema, with some discrete deep ulcers. Histopathology revealed diffuse moderately active colitis with surface erosion, with no chronic regenerative changes to suggest inflammatory bowel disease. Diagnosis of leflunomide-induced colitis was made given temporal correlation and absence of evidence of alternative causes. Leflunomide was discontinued, and patient was started on course of steroids with improvement of symptoms (**Figure**).
Discussion: Leflunomide can cause diarrhea in about 17% of patients. However, only a few cases of leflunomide-induced colitis are reported, with symptoms developing 10 days to 30 months after initiation. No characteristic endoscopic or histologic features have been found, with prior reports variably describing punctiform ulcers, hemorrhagic colitis, cryptitis, crypt abscesses, granulomas, enterocutaneous fistulas, lymphocytic colitis, and collagenous colitis. Diagnosis is challenging due to rarity of condition, variable interval from medication initiation to symptoms, and differing histological findings. Diagnostic criteria or treatment have not been proposed, but discontinuation of leflunomide can be diagnostic and therapeutic. This case highlights both the importance of keeping leflunomide-induced colitis in the differential and the potential adverse effects of delay in diagnosis.



[2026] **Figure 1.** (a) erythema and congestion, (b) ulceration, (c) erosions with exudates.

S2027

Extrinsic Compression of the Hepatic Flexure from Metastatic Cholangiocarcinoma Masquerading as Cecal Bascule

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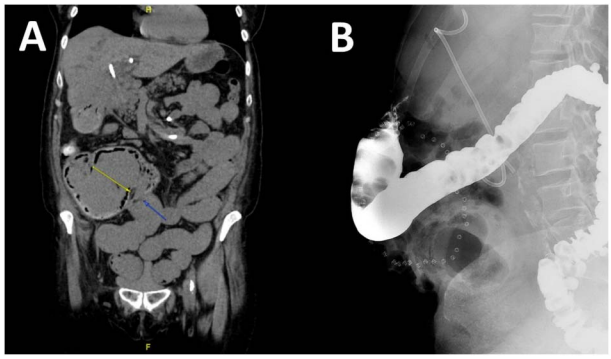
Introduction: Cecal bascules are the rarest variant of cecal volvulus that involve upward folding of the cecum, without axial twisting or sigmoid involvement. We present a case in which a patient with a hepatic flexure obstruction from extrinsic compression masqueraded as a cecal bascule on imaging.
Case Description/Methods: A 66-year-old woman with history of stroke, hypertension, recent obstructive cholestasis due to choledocholithiasis requiring biliary stent placement, presented with 3 days of right sided abdominal pain, 15lb weight loss and 3 weeks of constipation with thin stools. Computed Tomography (CT) revealed dilated loops of distal small bowel and cecum that folded anteriorly and superiorly

with extensive pneumatosis (**Figure** A), consistent with cecal bascule (type III cecal volvulus). The ascending colon was dilated up to a decompressed hepatic flexure, where nonspecific bowel wall thickening was visualized. She had a normal colonoscopy a few months prior. The patient was initially managed conservatively, however a lower gastrointestinal series showed persistent obstruction at the hepatic flexure with bird-beak appearance (**Figure** B). She underwent an exploratory laparotomy that discovered a mass in the right upper quadrant involving the gallbladder and liver, causing extrinsic compression of the hepatic flexure and numerous omental nodules. Biopsies confirmed metastatic cholangiocarcinoma. The patient began evaluation for cancer staging, but ultimately passed one month after diagnosis.
Discussion: The development of a cecal bascule is usually attributed to an abnormally mobile cecum due to improper development and insufficient fixation of the mesentery to the posterior parietal peritoneum. A mobile cecum may also be acquired in pregnancy due to enlargement of the uterus, or after abdominal surgery such as open appendectomies which require extensive division of peritoneal attachments to the cecum. Clinical presentation can be variable with abdominal pain, distention and nausea being most common symptoms and ranging to an acute abdomen and perforation. Diagnosis of type III cecal volvulus requires CT imaging confirming a distended cecum lying anterior to ascending colon. Treatment generally involves surgical resection of the affected bowel as colonoscopic detorsion may lead to recurrence. This is a unique case of an extrinsic malignant obstruction causing a cecal bascule, highlighting the importance of a comprehensive evaluation for underlying etiologies.



[2027] **Figure 1.** A: Cecal bascule with extensive pneumatosis on CT. B: Lower gastrointestinal series showing obstruction at hepatic flexure with bird-beak appearance.

S2028

Epstein Barr Virus Positive Primary Diffuse Large B-Cell Lymphoma of Ascending Colon

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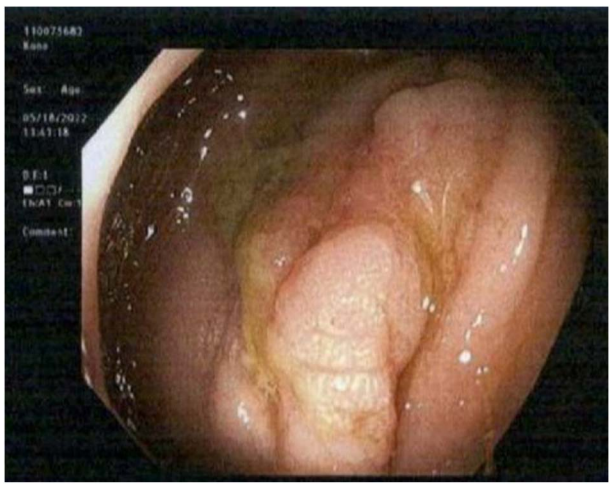
Introduction: Diffuse Large B cell lymphoma(DLBCL) is an aggressive subtype of Non Hodgkin's lymphomas and represent less than 0.5% of colorectal neoplasms. Extra nodal involvement of DLBCL in Gastrointestinal tract is common, but the primary DLBCL of Colon is a rare entity with only few cases reported in the literature. Here in, we present a rare case of Epstein Barr virus positive Primary DLBCL of ascending colon and cecum.
Case Description/Methods: A 53-year-old African American female with a past medical history of well controlled HIV presented to the emergency department with complaints of diffuse abdominal pain with bloody stools, fever , night sweats, and weight loss. Vitals were stable. Physical examination revealed right inguinal lymphadenopathy and diffuse abdominal tenderness. Laboratory studies showed elevated lactate dehydrogenase (1883). CT scan of the abdomen and pelvis showed diffuse retroperitoneal and pelvic lymphadenopathy and a large eccentric mass measuring 5.4 x 2.8 cm in the right hemicolon. Excisional biopsy of the right inguinal lymph node showed atypical clonal B-cell proliferation. Colonoscopy revealed multiple areas of villous and sessile non-obstructing polypoid mass in the ascending colon (**Figure**), which was resected and multiple areas of erythema in the cecum. Epstein Bar-virus encoded small RNA (EBER) stain was positive. Biopsy of the cecum and ascending colon showed atypical lymphocytic infiltrate. Immunohistochemical stains showed the atypical lymphocytes that were positive for CD20, PAX-5, CD10, BCL-6, C-MYC, and negative for BCL-2 with high proliferation of Ki-67. Based on these findings, a diagnosis of Stage IV, DLBCL was confirmed. She was initiated on Rituximab, Cyclophosphamide, Hydroxydaunorubicin, Oncovin, and Prednisone (R-CHOP) chemotherapy with good response.
Discussion: Management of DLBCL usually includes chemotherapy, Surgery, Radiotherapy or Combination therapy. However, the role of surgery is debatable. Cai etal reported the site dependent efficacy of surgery and improved overall survival with surgical intervention in right sided primary colonic lymphomas when compared to left side and rectum. The gold standard treatment of DLBCL has always been chemotherapy. R-CHOP regimen has showed efficacy in survival benefit. Several other combination therapies and targeted therapies are under investigation. Primary DLBCL of the colon can present with non-specific site dependent symptoms. Early diagnosis and immediate intervention can greatly improve the survival.



[2028] **Figure 1.** Villous and sessile non-obstructing polypoid mass in the ascending colon.

S2029

Epiploic Appendagitis: A Red Herring?

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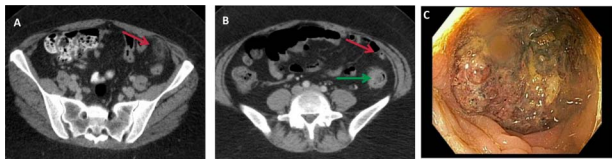
Introduction: Epiploic appendagitis (EA) is a rare cause of acute abdominal pain that has a relatively benign course. The importance of identifying EA as a clinical mimicker is crucial to avoid unnecessary hospitalizations, antibiotic use, and surgery. Although no trigger has been established as a cause for EA, it is hypothesized that systemic inflammation can lead to an EA attack.
Case Description/Methods: A 43-year-old White female with no significant GI history presented with 2 days of sudden onset, sharp, non-radiating, worsening left lower quadrant (LLQ) with nausea. Initial blood work was unremarkable. CT abdomen revealed a hyper-attenuating ring lesion along the anti-mesenteric margin adjacent to the distal descending colon, along with mesenteric lymph nodes consistent with epiploic appendagitis. She was managed conservatively with complete resolution of symptoms. A few years later, she presented again, with similar abdominal complaints. Repeat abdominal imaging showed recurrence of EA in the same location. Few shotty mesenteric lymph nodes were identified. She was treated conservatively for EA. A few more years passed, and she now had another episode of recurrent LLQ pain, CT abdomen showed findings consistent with EA along with a short segment of mural thickening and mild hyper-enhancement in the mid descending colon. Colonoscopy revealed a large circumferential mass in the sigmoid colon with an apple core lesion in the proximal sigmoid colon with luminal narrowing. Biopsy revealed an adenocarcinoma. No lymph node involvement was noted. As the TNM staging was pT3 N0 M0, she underwent a sigmoidectomy with left colon and rectal end-to-end anastomosis (**Figure**).
Discussion: Epiploic appendages are fat-filled serosal outpouchings of the colonic surface. They are connected to the colon by a vascular stalk. Acute epiploic appendagitis is theorized to be caused by torsion, underlying inflammation, or venous occlusion of the appendage. CT scan is the gold standard for diagnosing EA and helps rule out other intra-abdominal pathologies. Recurrent and persistent EA is very rare and may mask an underlying occult abdominal pathology. There have not been any reported cases of CRC that are associated with and possibly trigger EA. In patients with recurrent EA, after common causes of acute abdominal pain are ruled out, evaluation for intestinal/intraluminal pathologies, especially colorectal malignancy should be considered as they are not readily apparent on CT scans.



[2029] **Figure 1.** A: Red arrow showing an inflamed epiploic appendage during initial presentations. B: Red arrow showing epiploic appendagitis. Green arrow with colonic wall thickening in the descending colon, with adjacent EA. 3: Colonoscopy showing the large friable mass in the sigmoid colon.

S2030

Fecal Incontinence Due to Cerebral Autosomal Dominant Arteriopathy With Subcortical Infarcts and Leukoencephalopathy (CADASIL)

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Introduction: Fecal incontinence, or the accidental passing of solid or liquid stool, is a common condition that occurs in up to 15% of the Western population and significantly impairs quality of life. Common causes of fecal incontinence include structural damage to the anal sphincter, fecal impaction, rectal prolapse, and neurologic impairment (e.g. diabetes, stroke). In the following report, we describe a case of fecal incontinence caused by Cerebral Autosomal Dominant Arteriopathy with Subcortical Infarcts and Leukoencephalopathy (CADASIL), a rare hereditary neurological disorder of the cerebral vessels that causes recurrent ischemic strokes and progressive loss of cognitive function.
Case Description/Methods: A 66-year-old White male with a 15-year history of CADASIL presented to clinic for evaluation of fecal incontinence. He reported that his symptoms began approximately 18 months earlier and improved over time, but then recurred with urinary incontinence and persistent worsening 6 months prior to presentation. He denied having any abdominal pain, unintentional weight loss, rectal bleeding, or history of rectal trauma. He was up to date on screening colonoscopy. On digital rectal exam, the patient was noted to have normal resting tone and diminished sphincter squeeze; there was no evidence of mass, rectal prolapse, or hemorrhoids. Upon review of his prior imaging, it was noted that he had severe small vessel ischemic changes in his brain with multiple infarcts, but no spinal cord compression. He declined anorectal manometry. Given the clinical picture, it was concluded that the patient's incontinence was due to recurrent strokes secondary to CADASIL.
Discussion: Fecal incontinence occurs in up to 40% of patients immediately after stroke. Treatment strategies focus on hygiene and skin protection, regulation of stool consistency, and pelvic floor physical therapy. CADASIL is characterized by multiple, recurrent strokes. Fecal incontinence in these patients is predictive of mortality, with one study showing 72% of patients experiencing fecal incontinence at time of death. Multiple cortical regions of the brain have been shown to be important in controlling the anal sphincter suggesting redundancy of function, which may explain why the presence of persistent fecal incontinence can be a marker of late-stage CADASIL. Our case report highlights the importance of clinical recognition of a rare disease as a potential cause of a common symptom.

S2031

Fibrosing Colonopathy in Chronic Alcoholic Pancreatitis: A Diagnostic Dilemma

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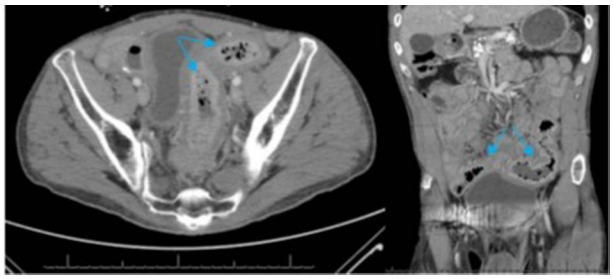
Introduction: Fibrosing colonopathy (FC) is a rare entity that has been associated with high-dose pancreatic enzyme replacement therapy (PERT) and has been mostly reported in patients with cystic fibrosis. We present a case of chronic alcoholic pancreatitis and FC that eluded diagnosis for 4 years resulting in multiple endoscopic interventions.
Case Description/Methods: A 47-year-old male with a history of substance abuse and chronic alcoholic pancreatitis presented with 1.5 days of lower abdominal pain, nausea and vomiting. He reported chronic watery diarrhea up to 5 times/day and lost 20 kg within 1 year. His current weight was 64 kg. Patient was on pancrelipase 24,000 units thrice daily, but he was intermittently non-adherent with PERT due to socioeconomic issues. He had 21 prior CT scans suggestive of colitis for which he underwent 5 lower endoscopic evaluations in the span of 4 years. Random colonic biopsies from these endoscopies were all histologically normal. Work-up for infectious, celiac, thyroid and inflammatory bowel diseases was unremarkable. Fecal elastase was undetectable. Vitamins A, D and E levels were low. After a second careful review of all prior images with radiologist, there was evidence of chronic, colonic wall thickening without inflammation consistent with FC. After excluding other pathology, exocrine pancreatic insufficiency was the likely etiology of his symptoms. The patient was continued on the current dose of PERT and nutrition consultation was recommended (**Figure**).
Discussion: FC is a long segment colonic disease characterized by a gradual, fusiform stenosis of the lumen resulting from submucosal fibrosis. The exact pathogenesis remains unknown, but it has been associated with high doses of PERT and compounds in the enteric-coated material. FC may occur months to years after the initiation of high-dose PERT. Interestingly, our patient was on PERT for 5 years and was prescribed an appropriate dose. FC commonly manifests as abdominal pain, diarrhea, hematochezia and, in some cases, small bowel obstruction. Prior intestinal surgery is a possible risk factor for FC. On endoscopy, a loss of haustral pattern or "cobblestone" colonic mucosa may be seen. While a full thickness colonic resection is the gold standard for diagnosis, FC was diagnosed in our case based on clinical and radiologic data after exclusion of other pathology. Management of FC involves avoidance of high doses of PERT (>10,000 units/kg/day). Surgical resection of the colon is reserved for refractory cases



[2031] **Figure 1.** Panel 1. Axial view (left) and coronal view (right) of an abdominopelvic computed tomography scan with intravenous contrast demonstrating colonic wall thickening of the mid and distal sigmoid colon (blue arrows).

S2032

Epiploic Appendagitis as an Uncommon Cause of Abdominal Pain

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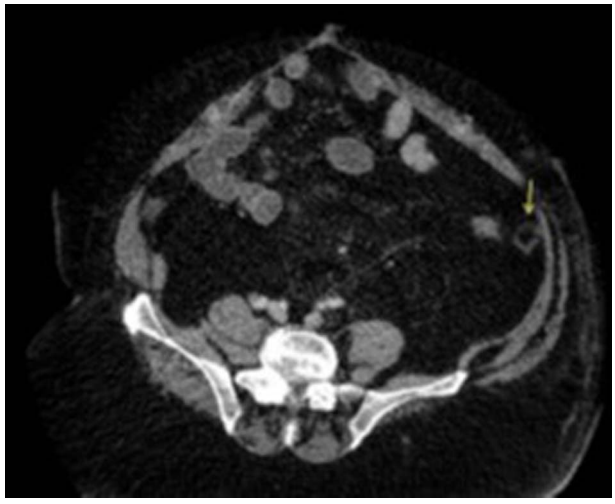
Introduction: Acute epiploic appendagitis (EA) is a self-limited inflammation of the appendices epiploicae. Epiploic, also known as omental, appendages are pouches that derive from the peritoneum. These appendages are made of adipose tissue and each appendage contains a venous and arterial supply. If torsion of the appendage occurs, occlusion of the vascular supply can lead to ischemia and may cause EA. Acute EA is associated with obesity, abdominal hernias, and heavy or unaccustomed exercise. EA management is supportive. The increased utilization of CT imaging for acute abdomen visits to emergency rooms nationwide has led to increased identification of this condition. Such radiographic diagnosis has obviated the need for unproven therapies such as antibiotics and surgery.
Case Description/Methods: A 66-year-old male with past medical history of gastrointestinal stromal tumor status post small bowel resection presented to the emergency room complaining of epigastric abdominal pain of one day duration. The pain was constant, non-radiating, cramping, and awakened him from sleep. The patient rated the pain as 7/10 in intensity. The pain was not alleviated by acetaminophen use and was associated with 3 loose, non-bloody, non-mucoid bowel movements. A CT of the abdomen/pelvis showed an ovoid fat density area adjacent to the descending colon with a high-density rim and mild surrounding inflammatory fat stranding, suggestive of EA (**Figure**). He was treated with oral anti-inflammatory medications and discharged home. At follow-up one week later his abdominal pain had completely resolved.
Discussion: This case illustrates that EA is not commonly considered in the differential for abdominal pain. Fortunately, this condition is easily diagnosed on CT imaging. With the rise of CT scan use in the work-up of acute abdominal pain, EA is easily identified and can be appropriately managed. Radiographically, acute EA is described as an oval-shaped mass lesion of fat density with a hyper-attenuating dense rim. EA is a self-limited and self-resolving condition. The treatment is oral anti-inflammatory medication with recovery expected within 10 days. There is no indication for antibiotics in acute EA. Correct diagnosis is meaningful to avoid unnecessary hospital stay. The importance in highlighting this case is that EA diagnosis is very unlikely in the absence of CT scanning due to lack of clinician awareness and uncommon nature of the disease. This case highlights the radiologic assessment of EA and its appropriate treatment.



[2032] **Figure 1.** Yellow arrow points to the hyper-enhancing dense rim of an oval-shaped lesion with fat density, indicative of acute EA.

S2033

Gastrointestinal Mantle Cell Lymphoma: A Rare Asymptomatic Endoscopic Presentation

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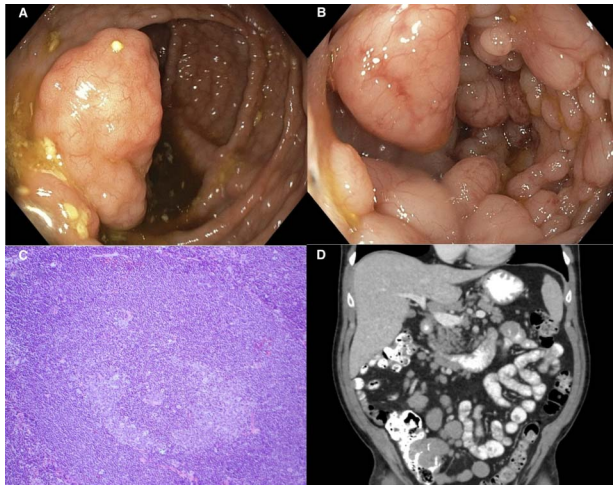
Introduction: Mantle cell lymphoma is one of the types of B-cell non-Hodgkin's lymphoma due to overexpression of Cyclin D1 in the setting of chromosomal translocation t(11:14). Extranodal involvement can be seen with the disease which includes the gastrointestinal tract in up to 20% of patients. MCL is usually aggressive with findings of advanced disease on diagnosis including lymphadenopathy, splenomegaly, and bone marrow involvement. Due to this advanced nature, most patients are significantly symptomatic at diagnosis. We report a case of a 67-year-old male patient who presented asymptomatically for routine colonoscopy found to have gastrointestinal mantle cell lymphoma.
Case Description/Methods: A 67-year-old man with no relevant past medical history presented to discuss colonoscopy for colon cancer screening. He was asymptomatic with no previous colonoscopy and no family history of malignancy. He underwent colonoscopy which was remarkable showing pancolonic nodular polypoid mucosa with significant nodular enlargement of the IC valve. Segmental biopsies throughout the colon returned as colonic mucosa with prominent lymphoid aggregates. Biopsies of the IC valves showed mild inflammation. Given the peculiar nature of the endoscopy and biopsy results, a CT of the abdomen was ordered to help further elucidate the cause of the patient's findings. CT scan showed an enlarged polypoid 4.9cm ileocecal valve with splenomegaly and associated adenopathy. The patient was scheduled for a repeat colonoscopy and the terminal ileum and IC valve were biopsied extensively. However, biopsies this time were sent for lymphoma panel testing given the CT scan findings that were previously described. Biopsies returned consistent with MCL showing diffuse atypical lymphoid proliferation with irregular nuclear contours. On immunohistochemical staining, the atypical lymphocytes were positive for CD20, Cyclin-D1, CD5, and BCL2. The patient was referred to oncology for further evaluation (**Figure**).

Discussion: Mantle cell lymphoma is a subtype of non-Hodgkins lymphoma (NHL) making up about 7% of NHL in adults. MCL predominantly presents with advanced disease. Gastrointestinal involvement during endoscopic evaluation is rarely the presenting sign, as in this patient, which most commonly manifests as diffuse lymphomatous polyposis. Recognizing this endoscopic finding is important as it can expedite diagnosis by appropriately analyzing tissue obtained through biopsy and attaining further imaging to confirm the suspicion of lymphoma.



[2033] **Figure 1.** A. Nodular ileocecal valve with surrounding polypoid colonic mucosa B. Polypoid mucosa in the terminal ileum C. Lymphoma cells with irregular nuclear contours, irregular chromatin, inconspicuous nucleolus, and moderate amount of cytoplasm. D. CT scan showing 5.0cm ileocecal valve.

S2034

Gastric Ulcerations With the Newer Pill-Based Bowel Preparations for Colonoscopy: Modifications to Improve Patient Outcomes

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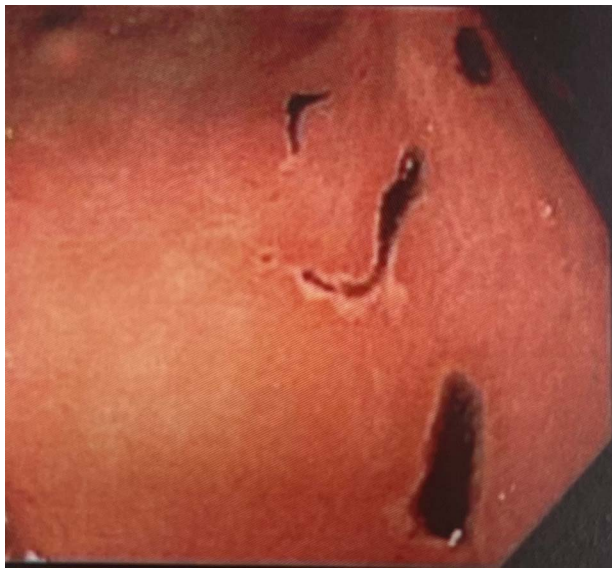
Introduction: Pill-based preparations for endoscopy have become increasingly popular relative to liquid preparations due to patient preference and cleansing efficacy. SUTAB® (sodium sulfate, magnesium sulfate, and potassium chloride Tablets) is a newly FDA approved pill-based endoscopy preparation with a 92% successful cleansing rate in trials. SUTAB® on-label administration recommends consuming 12 tablets with 16 ounces of water within 30 minutes, followed by 32 ounces of water on the day before and morning prior to pan-endoscopy. However, rapid consumption of tablets has been associated with chemically-induced ulceration. Here, we discuss 2 cases who underwent pan-endoscopy for iron deficiency anemia with findings of acute ulcerations and suggest recommendations for staggered pill consumption to improve patient outcomes.
Case Description/Methods: In case #1 (male, age 46), pan-endoscopy was indicated for anemia, abdominal distention and mild gastroesophageal reflux. Relevant findings on upper endoscopy were moderate gastritis and antral erosions/ulcerations (**Figure).** In case #2 (female, age 54), a pan-endoscopy was indicated for iron deficiency anemia. Relevant findings on upper exam included moderate gastritis, multiple antral erosions, and healing superficial antral ulcers with eschar. Standard SUTAB on-label administration was followed. In the absence of prior symptoms/other causative etiology, erosions and ulcerations were deemed drug-induced. In all subsequent cases at our center warranting pan-endoscopy , we modified the manufacturer specified SUTAB administration protocol, which involved consuming each of the 12 pills 5 minutes apart with 25 ounces of water, both on the day before and morning prior to pan-endoscopy. This staggered modified administration led to complete alleviation of the noted erosions/ulcerations in all subsequent cases.
Discussion: Although pill-based endoscopy preparations are convenient, the current on-label stacked administration recommendations may cause gastric ulcerations. Physicians using the revised on-label SUTAB® administration may still find unexpected ulcerations/erosions without other causative etiology. An off-label modification of administration to further stagger the intake of each pill over 5 minutes (as opposed to the package recommended 2.5 minutes) may improve noted endoscopic patient outcomes and should be considered. The optimal pill intake protocols however need to be defined in studies in larger pool of patients.



[2034] **Figure 1. A**cute antral ulcerations.

S2035

Helminthic Colitis Mimicking Inflammatory Bowel Disease

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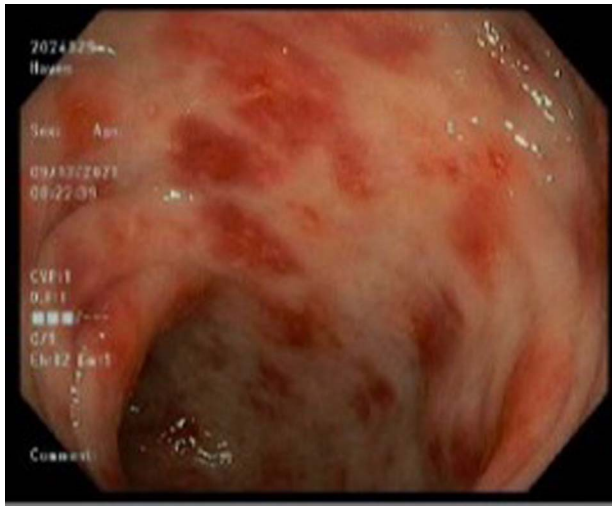
Introduction: Strongyloides colitis is caused by the helminth *Strongyloides stercoralis,* which is typically contracted via skin contact with contaminated soil. This parasite is able to complete its life cycle within the human host and autoinfection is characteristic. The duration from dermal penetration to gastrointestinal (GI) symptom manifestation can occur as soon as 3-4 weeks. GI symptoms can include diarrhea, constipation, abdominal pain, anorexia, vomiting and/or borborygmi. Notably, it is rather unusual for strongyloides colitis to present initially with hematochezia.
Case Description/Methods: A 22-year-old female with latent tuberculosis (TB) and recently diagnosed Ulcerative Colitis (UC) presented with refractory abdominal pain and 10-20 bloody bowel movements per day. She initially established 2 months earlier for rectal bleeding and colonoscopy at that time demonstrated erythema and ulceration throughout the colon, concerning for UC. An empiric steroid taper and topical aminosalicylates were started, but achieved no symptom relief. Repeat colonoscopy demonstrated mild patchy erythema and congestion throughout the colon, which then prompted the initiation of oral prednisone 40 mg daily with plans to initiate another taper outpatient. Ten days after steroid initiation, the patient was admitted for worsening respiratory symptoms. Given her history of latent TB, Infectious Disease was consulted to assist in an infectious evaluation. Imaging revealed a right upper-lobe infiltrate and 3 AFB sputum cultures grew mycobacterium confirming recurrent TB. In addition, strongyloides IgG was positive. In light of her serology findings, her endoscopic pathology was reviewed and was noted to be more consistent with parasitic infection as opposed to IBD given the skip pattern of inflammation. Ivermectin was prescribed and steroids were discontinued. At 2-month follow-up, the patient noted complete resolution of her rectal bleeding and dyschezia (**Figure)**.
Discussion: *Strongyloides stercoralis* is an uncommon etiology of colitis in North America, but can sporadically occur in temperate areas. Certain features of strongyloides colitis that contrast UC in literature include skip pattern of inflammation, distal attenuation, eosinophil rich infiltrates, relative intact crypt architecture, and frequent involvement of the submucosa. Although this case demonstrates distal augmentation of disease burden, which is uncharacteristic of strongyloides colitis, we believe her response to ivermectin confirms the diagnosis.



[2035] **Figure 1.** Endoscopic image of the sigmoid colon with patchy erythema and congestion.

S2036

Granular Cell Tumor of the Cecum: An Uncommon Tumor in an Unusual Location

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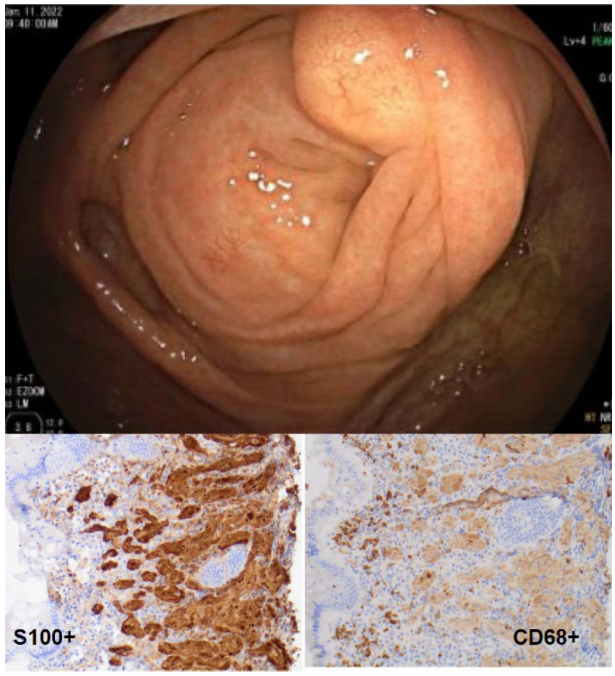
Introduction: Granular cell tumors are rare soft tissue neoplasms derived from Schwann cells and are commonly found in the skin, oral cavity, and gastrointestinal tract. While most follow a benign course, malignant cases have been reported in 1-2% of cases. In the gastrointestinal tract, the majority of cases involve the esophagus but rarely these tumors will involve the colon. We present a case of a granular cell tumor of the cecum found incidentally in a middle aged woman during a screening colonoscopy.
Case Description/Methods: A 52-year-old female presented for colon cancer screening. She used tobacco but had no past medical history. She denied a family history of colon cancer or colon polyps. Physical examination was normal. Colonoscopy revealed a 1 cm subepithelial, polypoid lesion in the cecum in close proximity to the appendiceal orifice. Biopsies revealed a proliferation of plump cells with bland nuclei and granular, eosinophilic cytoplasm in the lamina propria and submucosa. The cells were S100 and CD68 positive, consistent with a granular cell tumor. Due to subepithelial involvement she underwent laparoscopic appendectomy with en bloc wedge resection of cecum with negative margins (**Figure**).
Discussion: Gastrointestinal involvement of granular cell tumors account for 5-11% of all cases reported. In the gastrointestinal tract, the esophagus is the most frequently encountered location followed by the duodenum, anus, stomach, and colon. Less than 130 cases of colonic involvement have been reported. Most lesions are found incidentally on screening colonoscopy. While most tend to follow a benign course, malignant lesions have been reported. Management typically involves surgical resection due to subepithelial involvement or endoscopic submucosal dissection. This case highlights the importance of recognizing colonic involvement of a tumor that is typically considered to be a tumor of the esophagus. Endoscopists should consider granular cell colonic tumors when encountering subepithelial lesions of the colon.



[2036] **Figure 1.** Endoscopic and microscopic images of Granular Cell Tumor.

S2037

Giant Inflammatory Polyp: An Unusual Cause of a Positive Fecal Immunochemical Test

Aaron Issac, MD, Autumn Hines, DO.
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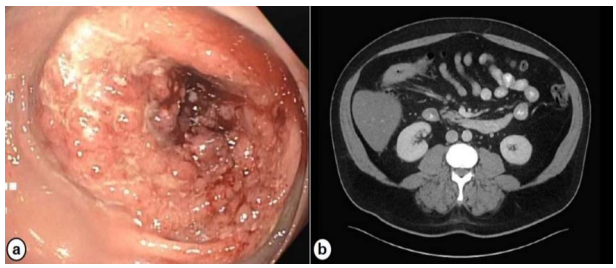
Introduction: Fecal Immunochemical test (FIT) is a common screening method for colorectal cancer. When positive, a follow-up colonoscopy is needed to rule out an underlying colorectal malignancy or polyps. We present a case of an asymptomatic patient with a positive FIT who was found to have a nearly obstructing, giant inflammatory polyp on diagnostic colonoscopy, which ultimately led to the diagnosis of Crohn's disease.
Case Description/Methods: A 61-year-old male with a history of diabetes mellitus, hypertension, and obstructive sleep apnea presented for a diagnostic colonoscopy after being found to have a positive FIT as part of his annual physical. Prior to this the patient had a negative FIT 5 years ago and a normal colonoscopy in the distant past. He reported no abdominal discomfort, rectal bleeding, change in bowel habits, family history of inflammatory bowel disease (IBD) or colorectal cancer, and used NSAIDs only as needed. During his diagnostic colonoscopy, he was found to have a friable right colon mass that took up 85% of the lumen. The scope could not traverse the mass. On histology, the mass showed inflammation without adenomatous or malignant changes. A subsequent CT scan was performed that showed a 7.5 cm segment of diffuse bowel wall thickening compromising the lumen in the hepatic flexure. Given the features of the nearly obstructing mass, it was decided that the patient was a candidate for a right hemicolectomy for definitive diagnosis and treatment. On final pathology, findings were consistent with a giant inflammatory polyp. A colonoscopy performed one year later showed recurrent inflammation and ulceration at the anastomotic site, in addition to inflammation in the transverse colon. Biopsies of this area revealed findings suggestive of Crohn's disease (chronic active inflammation, cryptitis, and granulomas) (**Figure**).
Discussion: This case was an unusual presentation of a giant inflammatory polyp, which ultimately led to the diagnosis of Crohn's disease. Though giant inflammatory polyps can be seen in patients with IBD, the initial presentation was unusual as it was found incidentally and was concerning for malignancy. Ultimately a right hemicolectomy was needed given the obstructing features of the mass and the need for definitive diagnosis. Although malignancy remains the highest concern for this type of clinical presentation, it is important to consider other potential diagnoses.



[2037] **Figure 1.** (a) Obstructing right colon mass seen on initial colonoscopy (b) Surveillance CT after initial colonoscopy showing obstructing colon mass.

S2038

Gastrointestinal Disseminated Histoplasmosis in a Patient With History of Kidney Transplant

Wei Yan, MD, Nandakumar Mohan, DO, Otoniel Hill, MD, Matthew Chan, DO, Prutha Shah, DO, James Walter, MD.
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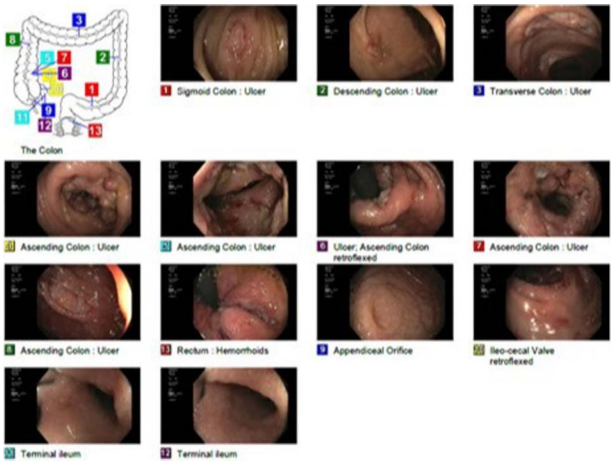
Introduction: *Histoplasma capsulatum* is a fungus commonly found in bird and bat droppings in the Ohio and Mississippi river valley regions of the United States. Infection with this fungus can range from mild, asymptomatic pneumonia, cavitating pulmonary lesions, to disseminated disease with multiorgan involvement. Immunosuppressed patients are at higher risk for infectious complications than the general population. We present a very rare case of Histoplasma colitis in a young, post-kidney transplant female.
Case Description/Methods: Patient is a 38-year-old Brazilian female with known history of kidney transplant in 2010 on chronic immunosuppression with prednisone, tacrolimus, and mycophenolic acid and hypertension who initially presented with intermittent low-grade fevers and chronic diarrhea. She reported persistent large volume watery diarrhea for the past year with associated weight loss. Outpatient infectious stool studies have been negative on numerous occasions. However, given her fevers and immunosuppressed state, *Clostridium difficile*, EBV and CMV PCR were sent. Despite supportive care and negative testing, her diarrhea persisted. Patient underwent a colonoscopy that revealed multiple ulcers in the entirety of the colon with a very large ulcer that was circumferential and mass-like in the ascending colon (ulcers ranged from 5 – 20 mm). Biopsies revealed fragments of ulcerated colonic mucosa with inflammation and organisms compatible with *Histoplasma capsulatum* with negative CMV but positive GMS and PAS staining. CMV staining was negative. The patient was then appropriately started on liposomal amphotericin B for disseminated histoplasmosis and had significant improvement in diarrhea with plans to transition to itraconazole for a total of 12 months of therapy (**Figure**).
Discussion: Common pathogens involved in infectious colitis include bacteria such as *Campylobacter, Salmonella, Shigella, E. coli*, viruses such as *Cytomegalovirus (CMV), Norovirus, Rotavirus, and Adenovirus*, and sexually transmitted infections such as *Neisseria gonorrhoeae, Chlamydia trachomatis, and Herpes simplex*. Fungal pathogens such as *Histoplasmosis capsulatum* rarely is found as a causative organism for infectious colitis. Our case adds to the scarce literature demonstrating this presentation of a common fungal pathogen. Keeping a high index of suspicion for severe infections, especially in individuals who are immunosuppressed, can allow for prompt and appropriate anti-microbial treatment and stewardship.



[2038] **Figure 1.** Fragmented and ulcerated mucosa in patient with disseminated gastrointestinal histoplasmosis.

S2039

Idiopathic Myointimal Hyperplasia of Mesenteric Veins Disguised as IBD: A Diagnostic Challenge

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Introduction: Idiopathic myointimal hyperplasia of the mesenteric veins (IMHMV) is a rare condition affecting young males and is characterized by proliferation of intimal smooth muscles and hyperplasia of the mesenteric veins, and affects the rectosigmoid region. Clinically and endoscopically it mimics inflammatory bowel disease (IBD) with the biopsy showing features of ischemic colitis.
Case Description/Methods: We present a case of a 52-year-old male with a history of IDDM and hypertension who presented with the complaints of cramping lower abdominal pain, rectal urgency and foamy mucous like diarrhea following a screening colonoscopy. On presentation, he had stable vital signs. Physical exam revealed left lower quadrant tenderness without peritoneal signs. Pertinent bloodwork showed a normal white count, CRP and ESR. CT scan of the abdomen and pelvis showed diffuse wall thickening from the distal descending colon to the rectum consistent with colitis. Colonoscopy showed congestion of the mucosa and biopsies were consistent with ischemic colitis. CTA of the abdomen and pelvis failed to show significant large vessel disease. He was given a trial of high dose prednisone and rectal mesalamine for the working diagnosis of IBD without improvement in symptoms. Patient underwent rectal wall biopsy which showed acute ischemic injury. Subsequently, he underwent left partial colectomy for ischemic bowel. Pathology showed diffuse myointimal proliferation of mesenteric veins with luminal obliteration, acute and chronic inflammation, fat necrosis of surrounding adipose tissue and a viable muscularis propria. Fibrinoid necrosis of mucosal vessels were noted. These changes were consistent with IMHMV with secondary ischemic necrosis and were confirmed through Elastin and Desmin stains. Patient symptomatically improved following the bowel resection.
Discussion: IMHMV should be suspected in young males presenting with proctosigmoiditis when biopsies are not consistent with IBD and symptoms fail to improve with standard therapy. With more awareness, IMHMV may be identified prior to complications such as ischemic bowel which necessitate surgical intervention. Currently there is no treatment for IMHMV, but as the pathogenesis is better understood with wider reporting, hopefully better treatment options will become available. As of now, resection of bowel appears to be curative.

S2040

Hiding in Plain Sight: The Challenge of Diagnosing Medullary Carcinoma of the Colon

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Introduction: Medullary carcinoma of the colon (MCC) represents < 3% of colon cancers and is characterized by microsatellite instability (MSI) leading to poor cellular differentiation. With its relative rarity and ambiguous histology, MCC remains a challenging, frequently-missed diagnosis.
Case Description/Methods: A 56-year-old post-menopausal female with asymptomatic iron-deficiency anemia was referred to gastroenterology for bidirectional endoscopy. Colonoscopy identified multiple colonic polyps and a mass nearly obstructing the ascending colon. Abdominopelvic CT showed an 8.1 cm mass with associated mesenteric lymph nodes but no extracolonic involvement. CEA levels were normal. Initial biopsy demonstrated poor tumor differentiation. Immunohistochemical staining was positive for CD45, a marker of lymphocytic infiltration, but negative for cytokeratin (CK) 20, caudal-related homeobox gene 2 (CDX-2), and synaptophysin, interpreted as an undifferentiated carcinoma. The patient was referred to colorectal surgery and underwent laparoscopic right hemicolectomy without complication. Biopsy of the resected tumor redemonstrated the initial biopsy results without lymph node involvement. Additional stains showed high MSI and negativity for extracolonic tumor markers. These findings confirmed the tumor as a non-adenocarcinoma primary colonic lesion suggestive of MCC.

Discussion: The differential diagnosis for poorly-differentiated colonic tumors includes poorly-differentiated adenocarcinoma (PDA), neuroendocrine tumor (NET), MCC, and metastasis. This ambiguity has led to tumor misidentification in up to 66% of MCC cases; however, several key features can distinguish among these carcinomas. MCC displays negative chromogranin and synaptophysin staining, unlike NET. MCC almost invariably has high MSI and is infrequently CK20 and CDX-2 positive, unlike PDA. Clinically, MCC is more likely to present in the eighth decade, in females, and in the right colon than NET or PDA. MCC frequently follows an indolent course with good prognosis, while PDA often grows and spreads aggressively. While this case had a uniquely young age of presentation, it otherwise exhibits known clinical and histological features of MCC. As familiarity with these features rises and the use of MSI testing expands, accurate diagnosis of MCC will likely improve. With the expansion of colon cancer screening, the incidence of MCC is likely to rise, highlighting the importance of timely, accurate diagnosis when facing poorly-differentiated colonic tumors.

S2041

Human Papillomavirus-Associated Anal Adenocarcinoma

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Introduction: Human papillomavirus (HPV) is an oncogenic virus typically associated with the development of anal squamous cell carcinoma. Its association with the development of glandular lesions, however, is significantly less common. In the following report, we describe a case of HPV-associated anal adenocarcinoma.
Case Description/Methods: A 59-year-old female with history of anxiety and depression presented to clinic with constipation and intermittent rectal bleeding. She reported having worsening constipation over the prior 4 months, occasionally requiring digital disimpaction. She never had a prior colonoscopy and reported daily tobacco and occasional alcohol use. Family history was significant for colon cancer in her father. An in-office rectal examination revealed a firm mass in the anal canal, and a colonoscopy was performed the next day. This revealed a 3 cm mass in the anal canal, with biopsies diagnostic of invasive adenocarcinoma, as well as a high-grade squamous intraepithelial lesion (HGSIL). Given the unusual finding of adenocarcinoma histology in the anal canal, as well as the presence of a HGSIL, in situ hybridization testing for HPV was performed and was strongly positive. The patient denied a history of sexually transmitted infections or abnormal Pap smear. The patient was referred to colorectal surgery and a full thickness excision of the mass was performed which revealed poorly differentiated adenocarcinoma and a focus of high-grade squamous dysplasia. Margins were positive and initial staging CT of the chest, abdomen, and pelvis revealed metastases in the liver only. Against medical advice, the patient sought care from a naturopath. She returned 6 months later with new onset cephalgia and back pain. Subsequent CT now showed multiple metastatic lesions in the skull, lungs, liver, and spine. The patient was offered palliative chemoradiation therapy, but she opted for comfort measures and died shortly thereafter.
Discussion: Very little is known about anal adenocarcinoma, and reports of cases associated with HPV are exceedingly rare. A recent publication reported on 9 cases of HPV related adenocarcinoma of the anogenital tract. Imaging data on presentation was available in 4 cases, including all 3 involving the anorectum. None of these patients presented with metastatic disease as our patient did. Our patient's advanced disease may have been due to an aggressive nature of this poorly understood entity, but also due to her reluctance to pursue medical treatment.

S2042

Hydronephrosis: An Unusual Complication of Diverticular Abscess

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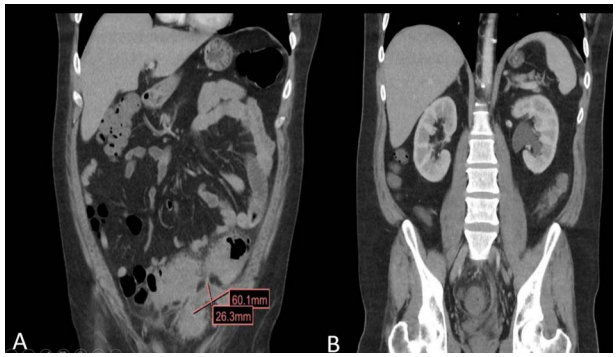
Introduction: Acute diverticulitis is inflammation due to microperforation of diverticulum in the colon. Ureteral complications from inflammatory bowel disease and colon cancer have been extensively documented, however, hydronephrosis as a complication of diverticulitis is rarely reported. We present a case of a patient with a diverticular abscess who developed left-sided hydronephrosis.
Case Description/Methods: A 40-year-old man with a past medical history of laparoscopic cholecystectomy presented with left lower quadrant cramping abdominal pain for 2 weeks. He endorsed constipation for 3 months but denied other symptoms. His physical examination was significant for a palpable phlegmon in the left lower quadrant with mild tenderness to palpation. Laboratory values revealed hemoglobin of 11.4 g/dl, platelet count of 499 k/ul and unremarkable basic metabolic panel. Computed tomography (CT) scan of the abdomen with contrast revealed severe sigmoid diverticulitis and perisigmoid abscess measuring 6 x 2.6 cm (**Figure** A). It further revealed moderate left hydronephrosis with narrowing of the ureter, concerning for external ureteral compression by the diverticular abscess (**Figure** B). After multidisciplinary discussion with interventional radiology, urology, and surgery, recommendation was made to undergo surgical intervention after the resolution of acute diverticulitis. The patient was treated with intravenous antibiotics with symptomatic relief and discharged with plan for outpatient surgery. The patient was unfortunately lost to follow-up. He presented 3 months later with perforated diverticulitis, persistent hydronephrosis, colovesical and colocutaneous fistula requiring exploratory laparotomy and repair. His surgical pathology was negative for malignancy and revealed severe diverticulitis. Patient was discharged home in stable condition.
Discussion: Ureteral complications in diverticulitis can occur due to the close anatomical location of the left ureter to the descending and sigmoid colon. Common urologic complications include the development of enterovesical fistulas and urinary calculi and obstruction. Physicians should be aware of this association to ensure a repeat CT scan is performed 4-6 weeks after acute diverticulitis to document resolution.



[2042] **Figure 1.** A. CT scan of the abdomen revealing 60.1 x 26.3 mm diverticular abscess. B. CT scan of the abdomen showing left hydronephrosis and dilation of the ureter.

S2043

Hiding Mantle Cell Lymphoma

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Introduction: Primary gastrointestinal lymphomas represent 1-4% of GI malignancies. Mantle cell lymphoma (MCL) is a Non-Hodgkin's lymphoma that -in the GI tract- is rare, representing fewer than 5% of primary gastrointestinal lymphomas. The clinical course ranges from indolent to aggressive. A patient's symptoms, imaging, and endoscopic findings can be non-specific, making the diagnosis of MCL challenging. We present a patient with an elusive intestinal lesion that was diagnosed as a primary gastrointestinal MCL.
Case Description/Methods: A 74-year-old man with a history of hypothyroidism and prostate cancer treated with prostatectomy presented with polyarthralgia, fatigue, dyspepsia and anorexia with 20-pound weight loss over 2 months. His physical exam revealed no abnormal findings. Laboratory studies revealed peripheral eosinophilia on complete blood count with an absolute eosinophil count of 1800 cells/mcL. Computed tomography showed a soft tissue lesion in the region of the cecum and ascending colon with multiple right lower quadrant sub-centimeter mesenteric lymph nodes. He underwent subsequent colonoscopy that demonstrated a normal appearing cecum and ascending colon. He was then evaluated with PET, which showed hypermetabolic activity at the ileocecal valve. He underwent a diagnostic laparoscopy which found no evidence of an extraluminal colonic mass nor mass in the mesentery or omentum. Repeat colonoscopy revealed a lesion in the terminal ileum with biopsies noting atypical lymphoid

infiltrate with t(11;14)(q13;q32) on FISH analysis and the patient was diagnosed with MCL. Patient's symptoms resolved and given the asymptomatic and localized nature with isolated gastrointestinal extra-nodal disease he is monitored with serial imaging.
Discussion: Primary gastrointestinal MCL is a rare disease with a variety of clinical presentations. The diagnosis can be challenging as patients who are symptomatic present with vague reports of anorexia, bloating or abdominal pain. Radiographically the lymphoma may or may not be apparent. Endoscopically the MCL can range from normal appearing mucosa to polypoid or ulcerated lesions. In this patient, it is likely that the ileal lesion periodically prolapsed into the colon- explaining the imaging findings. In the initial colonoscopy, the prolapsed segment spontaneously reduced, leaving only the falsely reassuring normal colon. High clinical suspicion based on subsequent imaging led to repeat colonoscopy with ileal intubation and tissue sampling, yielding the diagnosis.

S2044

Hemorrhoid or Cancer: Anorectal Mucosal Melanoma Discovered During Hemorrhoidectomy

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Introduction: Anorectal mucosal melanoma (ARM) is an exceptionally uncommon and aggressive malignancy that is often found at advanced stages of the disease, primarily due to its non-specific presentation. Primary ARM accounts for less than 2% of all melanomas. Because of its rarity, it is often misdiagnosed as benign conditions such as hemorrhoids or polyps on initial exam, thus leading to a delay in diagnosis and treatment. Additionally, up to 80% of lesions have decreased pigmentation and around 25% may be completely amelanotic. Many cases are already locally advanced at the time of diagnosis and the prognosis is overall quite poor, with the 5-year survival rate around 10-20%.
Case Description/Methods: This report presents a case of a 73-year-old White male with a past medical history of external hemorrhoids who presented to his primary care provider after developing rectal pain that did not resolve with sitz baths and over-the-counter topical therapy. A physical exam revealed 3 circumferential masses, believed to be hemorrhoids. The masses were then excised and sent for pathology, which revealed ARM with positive margins. Immunohistochemistry performed showed diffuse immunoreactivity for melan-A and SOX10 and negative for BRAF mutation. One month after diagnosis, the patient underwent abdominoperineal resection (APR) with colostomy followed by adjuvant therapy with pembrolizumab.
Discussion: This case highlights the importance for clinicians to express a high index of suspicion for ARM and should have a low threshold to biopsy suspicion lesions. The primary prognostic indicator for clinical outcomes is the stage at the time of diagnosis. Increasing awareness for ARM will hopefully improve the time to diagnosis and in turn, improve survival and quality of life.

S2045

Idiopathic AA Amyloidosis Presenting With Rectal Involvement and Intractable Hematochezia

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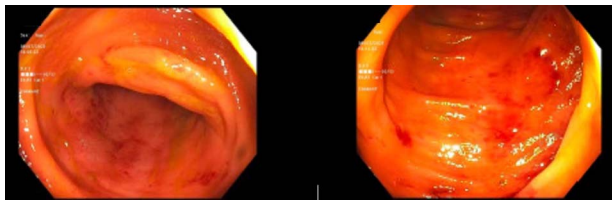
Introduction: Amyloidosis is a group of complex diseases caused by the misfolding, aggregation, and deposition of proteins as insoluble fibrils within tissues leading to progressive organ damage. Secondary amyloidosis is often associated with chronic inflammatory diseases and affects the GI tract in an estimated 60% of cases. The vast majority involve the upper GI tract, especially the duodenum, with only a small subset affecting the colon or rectum.
Case Description/Methods: A 47-year-old man with PMH of ESRD on HD and HTN presented with several episodes of hematochezia for the past 1 day. His abdomen was diffusely tender. Laboratory findings revealed a hemoglobin of 7.6 g/dL and a leukocyte count of 14.9 k/uL. Patient had several previous admissions over the past 2 years for hematochezia with no clear etiologies found with multiple unremarkable EGD and colonoscopies. Rheumatology was consulted given concern for an underlying autoimmune process. Serology was negative for RF, ANA, dsDNA, RNP, SSA/SSB, SCL-70, JO-1, Smith, TPO, CCP, and Centromere antibody. Colonoscopy revealed erythematous mucosa throughout the length of the colon. Biopsies taken from the duodenum, ileum, right and left colon, and the rectum revealed deposition of amorphous eosinophilic consistent with amyloid. Specimens analyzed LM-MS detected peptide fragments consistent with AA amyloidosis. The ileum, jejunum, transverse and descending colon had preserved architecture without signs of amyloid deposition. Of note, upper GI endoscopy from the year prior showed no signs of disease, suggesting a rapid progression of amyloidosis throughout the GI tract (**Figure**).
Discussion: The clinical manifestations of secondary amyloidosis vary depending on the organs affected. Involvement of the GI tract is more common in AL amyloidosis than in AA amyloidosis, and both diseases preferentially affect the upper GI tract, most commonly the duodenum. GI amyloidosis often presents with non-specific clinical findings such as diarrhea, obstruction, malabsorption, bleeding, erosion, or ischemia, and may represent a significant clinical challenge in its differentiation from other intestinal diseases such as IBD or malignancy. Although uncommon, GI manifestations of amyloidosis should be considered as a differential for patients in which standard therapies for intestinal disorders have not yielded clinical improvement.



[2045] **Figure 1.** Rectum (left) and rectosigmoid junction (right) with friable mucosa.

S2046

High-Grade Mucinous Adenocarcinoma of the Appendix With Signet Features and Omental Metastasis

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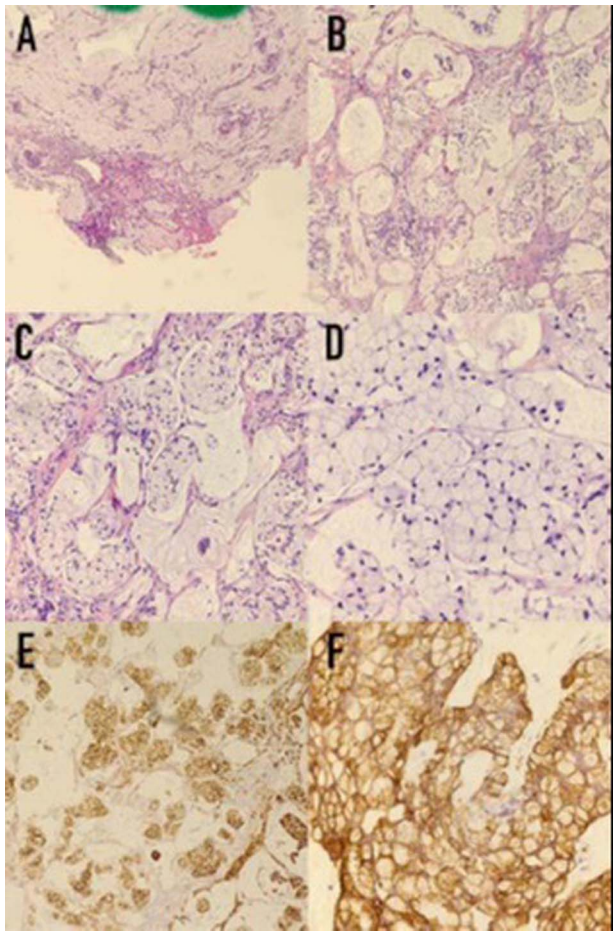
Introduction: Primary adenocarcinoma of the appendix is an uncommon malignancy of the gastrointestinal tract. It was first described in 1882 and constitutes around 0.12 to 2.6 cases per one million people per year. In addition, signet-ring cell carcinoma of the appendix is extremely rare, it constitutes approximately 4% of all primary appendiceal neoplasms. There are few reported cases of primary signet cell appendiceal carcinoma. In this present report, we describe a rare case of primary signet ring cell carcinoma of the appendix with omental metastases in an 81-year-old male who underwent laparoscopic appendectomy.
Case Description/Methods: We present a case of an 81-year-old male who had prior negative esophagogastroduodenoscopy (EGD) and colonoscopy in 2017 who presented to an urgent care in January 2021 with abdominal pain. Lab work was unremarkable, and the patient was sent home with instructions to visit the emergency department (ED) if he experienced fever, increased abdominal pain, or blood in the stool. Patient presented to the emergency department with increased abdominal pain in April 2021, and Computed Tomography (CT) scan of abdomen and pelvis with intravenous contrast showed a cystic appendiceal lesion with right peritoneal nodularity suspicious for peritoneal carcinomatosis. Therefore, the patient underwent appendectomy the following day revealing poorly differentiated, high-grade appendiceal adenocarcinoma with signet ring features, pT4a disease. Patient had a diagnostic laparoscopy in June 2021 and was found to have diffuse peritoneal carcinomatosis. Multiple biopsies were obtained and came back positive with high-grade mucinous adenocarcinoma with signet ring features. Patient agreed to pursue systemic chemotherapy. He was initiated on Capecitabine (Xeloda) 2000 mg tab PO, twice daily for 14 days and off for 7 days. Bevacizumab (Avastin) 7.5 mg IV infusion every 3 weeks (**Figure**).
Discussion: Patients with appendiceal neoplasms may have vague lower abdominal pain but are usually asymptomatic with incidental diagnosis on imaging or appendectomy. Signet ring adenocarcinoma of the appendix typically secretes mucin leading to metastasis throughout the peritoneum and eventual obstruction. Treatment is based on stage and histology. Surgical resection and peritoneal debulking is possible. High-grade tumors require further prospective trials to evaluate treatment, but treatment options include surgical management, HIPEC, and systemic chemotherapy.



[2046] **Figure 1.** Histologic examination showing a signet cell carcinoma of the appendix infiltrating the peritoneum and diaphragm. (A) right lower quadrant peritoneum biopsy, (H&E stain 100x): High grade mucinous carcinoma peritonei with signet ring cells. Pool of mucin with a cluster of epithelium that shows signs of metastatic carcinoma (enlarged nuclei, atypia, pleomorphic changes). (B, C, and D) Right diaphragm peritoneum biopsy. High grade mucinous carcinoma peritonei with signet ring cells. Image B at 100x, C at 200x, and D at 400x. (E & F) immunohistochemical cytokeratin stain (AE1/AE3) shows strong positivity of high grade carcinoma. E at 100x, and F at 400x.

S2047

Is It Anal or Rectal? A Rare Case of Squamous Cell Carcinoma

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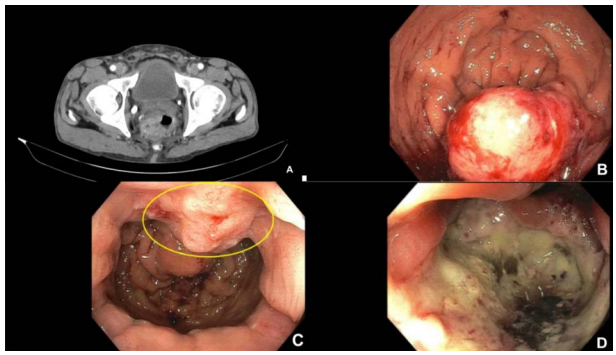
Introduction: Primary rectal squamous cell carcinomas (SCC) are extremely rare and difficult to distinguish from anal cancers. The majority of rectal SCC are secondary to anal SCC extension and detected at an advanced stage. Although rectal and anal cancers are anatomically close, they are distinct entities with risk factors, different histologic features, patterns of spread, staging systems, and treatment pathways. We present a rare case of a middle-aged man with AIDS who presented with bloody diarrhea, eventually found to have a primary rectal SCC.
Case Description/Methods: A 59-year-old-male with a history of AIDS presented with bloody diarrhea and fevers. He denied abdominal or rectal pain. Physical exam only revealed mild tenderness of the abdomen. Labs were unremarkable. Gastrointestinal PCR revealed shigella, enteroaggregative E. Coli, enterotoxigenic E. coli, and enteropathogenic E. coli infection. Computed tomography of the abdomen and pelvis revealed pancolitis and left irregular rectal wall thickening, concerning for rectal carcinoma. He was started on IV ciprofloxacin and metronidazole with improvement in symptoms. Colonoscopy revealed a non-obstructing mass in the rectum. Pathology demonstrated high-grade anal intraepithelial lesion (AIN-3) and focally invasive squamous cell carcinoma, with acute and chronically inflamed rectal mucosa. Given the incongruence between colonoscopy and pathology, it was uncertain whether a primary lesion of the rectum with spread to anus existed or if 2 separate pathologies were present. Repeat colonoscopy to define the anatomic location of the mass revealed a severely ulcerated, friable, rectal lesion, discontinuous from an area of anal inflammation, separated by normal mucosa. Repeat pathology revealed invasive and in situ SCC of the rectum. The patient was referred for chemoradiation with 5-fluorouracil and mitomycin (**Figure**).
Discussion: Primary rectal SCC accounts for 0.01% of all colo-rectal carcinomas. Risk is increased in patients with a history of Human Papilloma virus infection. The diagnosis of primary rectal SCC requires 3 criteria: (i) exclusion of metastasis, (ii) no squamous-lined fistulous tract involving the affected rectum, and (iii) exclusion of anal SCC with proximal extension (absence of continuity between the tumor and the normal anal squamous epithelium). Our patient ultimately fulfilled all these criteria. Primary rectal SCC should be considered a differential diagnosis in patients with HIV/AIDS, presenting with bloody diarrhea and a rectal mass.



[2047] **Figure 1.** CT of the abdomen and pelvis (A) revealing an irregular, asymmetric rectal wall thickening centered laterally on the left, highly concerning for rectal carcinoma, in addition to a focal left-sided outpouching from the rectum, suggesting a thick-walled diverticulum. Colonoscopy showing a rectal mass with ulcerated and friable mucosa (B&D). Area of anal inflammation (yellow circle, C) discontinuous from rectal mass with an adjacent small area of normal epithelium.

S2048

Iron Deficiency Anemia Secondary to Colonic Diaphragm Disease

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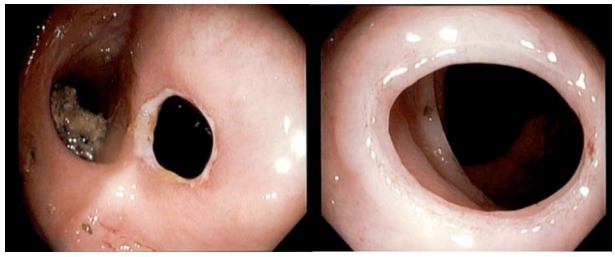
Introduction: The chronic use of NSAIDs has many well-established effects on the digestive system, specifically within the upper GI tract. One uncommon complication of chronic NSAID use is the formation of diaphragm-like strictures, characterized by the circumferential narrowing of mucosal membranes. These diaphragm-like strictures are most encountered in the small intestine, and there exists a limited number of cases reporting occurrence of such lesions within the colon. Our case highlights one such example and the importance of considering NSAID-induced colopathy as a causative factor for iron deficiency anemia.
Case Description/Methods: A 69-year-old female with history of chronic low back pain, and long-term use of diclofenac 75 mg twice daily, presented to the hospital with a hemoglobin of 6.2 g/dL discovered on outpatient lab work. Additional labs showed iron saturation 5% and ferritin 2 ng/ml at that time, consistent with iron deficiency anemia. She endorsed dyspnea on exertion, fatigue and lightheadedness for one month duration and denied symptoms of overt GI bleeding. The patient had a colonoscopy 5 years prior to presentation which revealed several benign polyps and diverticulosis with no strictures. EGD and colonoscopy were subsequently pursued. EGD showed mild erosive gastritis and colonoscopy revealed 5 diaphragm-like strictures with ulcerative edges located in the ascending and proximal transverse colon [see images] requiring CRE balloon dilation up to 15 mm to allow passage of the scope. The ileocecal valve could not be traversed due to significant narrowing. Biopsy of the diaphragm lesions showed benign colonic mucosa with chronic architectural distortion and ulcer bed. NSAID-induced colopathy was suspected to be the cause of anemia, for which she was counseled to discontinue NSAID use (**Figure**).
Discussion: NSAID-induced diaphragm-like strictures are encountered most often in the small intestine, specifically at the ileum. Colonic diaphragm disease (CDD) remains a lesser recognized entity and their prevalence remains unknown, occurring predominantly in the proximal ascending colon. Poor recognition of NSAID-induced colopathy has led to misdiagnosis with conditions such as Crohn's disease. Therefore, in providing another example of this rarer finding, it is one aim of this case report to encourage NSAID-induced colopathy to be considered in differential diagnosis for iron deficiency anemia among different other GI pathologies.



[2048] **Figure 1.** Diaphragm lesions in the right colon.

S2049

Important Considerations for Gastroenterologists to Take into Account in an Adult Patient With Anorectoplasty Secondary to Anorectal Malformation

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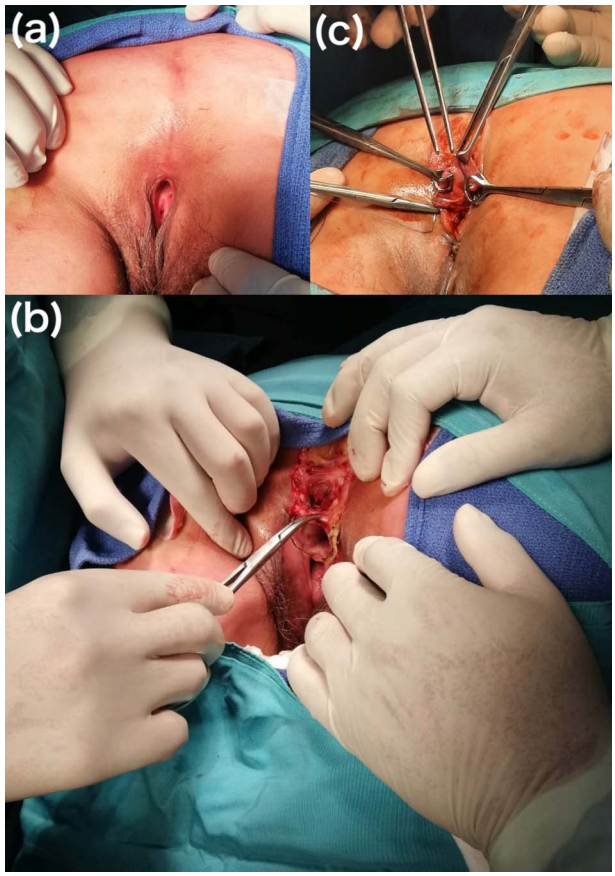
Introduction: Anorectal malformations (ARMs) are congenital conditions with varying clinical presentations. The approximate incidence is 1:2,500 to 1:5,000 live births. Diagnosis and treatment are usually performed in childhood; therefore, ARMs are relatively rare in adults. However, some cases can go unnoticed in underdeveloped countries due to health care barriers and errors. Globally, few cases of ARMs have been reported in adulthood, so the literature is limited. Medical debate continues about the best approach and follow-up of the patient. The objective of this case is to describe the main gastroenterological points for consideration.
Case Description/Methods: A 54-year-old female patient product of a vaginal birth delivered outside of medical facilities by unqualified personnel. Throughout the patient's childhood, she consulted different clinics and public health services for infections secondary to the discharge of feces through the vagina. In 2021, she was seen at a family medicine clinic of the national university in Guatemala for osteoarthritis. In her medical history, she mentioned the ARM condition and was referred to a proctologist who diagnosed an *Imperforate Anus* (**Figure A)** and a *Rectovestibular Fistula*, even though she had successfully delivered 3 infants by c-section. An MRI was ordered to rule out any other associated malformations prior to surgery. Subsequently, a 2-stage surgery under spinal anesthetic block was performed: First, a loop colostomy and Peña Posterior Sagittal Anorectoplasty were done (**Figure B, C**), with a thinning of the elevator and anus muscles diagnosed. Three months later a colostomy closure was performed. The patient has been followed monthly for 6 months with satisfactory results with anal dilatation reserved, if necessary, but the functionality of the neo-anus has, to date, been adequate.
Discussion: The main points for consideration are a) age should not be a contraindication for corrective surgery; b) the functionality of the sphincter complex must be determined in each patient; c) due to the congenital etiology of the imperforate anus, as well as physiological and the anatomical changes, there has been no developed hemorrhoidal vascular network; d) the main anticipated complication is cicatricial stenosis of the neo-anus secondary to the surgical intervention, so programmed anal dilations should be considered if needed. Given the rarity of ARMs in adults, further manometric research of the physiology of the anal complex is required to establish functionality parameters.



[2049] **Figure 1.** Anorectoplasty Process: (a) Imperforate anus, (b) Anorectoplasty with reconstruction of the rectovaginal septum, (c) Anoplasty.

S2050

Inferior Mesenteric Arteriovenous Fistula Treated with Embolization

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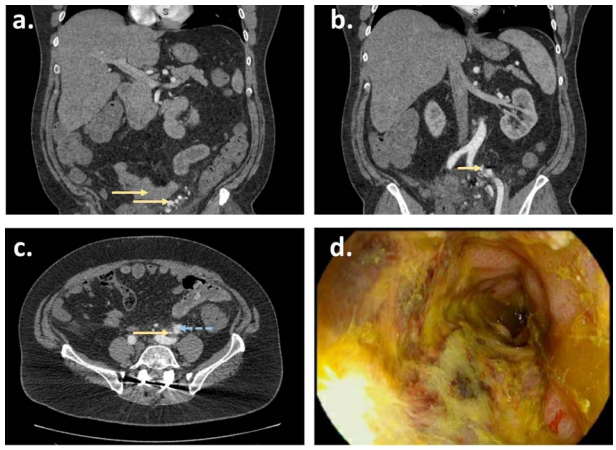
Introduction: Inferior mesenteric arteriovenous fistulous malformations are a rare yet reversible cause of ischemic colitis. They can cause increased outflow of blood in the venous circulation and predispose to colon ischemia. We report a case of inferior mesenteric arteriovenous fistula causing ischemic colitis in an atypical distribution in the IMA territory.
Case Description/Methods: A 50-year-old gentleman presented to the emergency room with a 3-week history of abdominal pain and bloody diarrhea. His symptoms started with a dull pain, 8/10 in intensity, with radiation to his lower back. He had also been having a low appetite for the duration of his abdominal pain. He described having around 10 bowel movements daily with blood mixed with mucus. CT abdomen showed diffuse circumferential thickening involving the entire sigmoid colon, extending to the upper rectum suggesting non-specific colitis. He came to the hospital 2 weeks prior to his presentation and underwent a colonoscopy which grossly showed diffuse severe inflammation in the distal descending colon, sigmoid colon and proximal rectum, till 30 cm from the anal verge suggesting left-sided colitis. Biopsied from the region showed evidence of ischemic colitis. His CT-angiography showed engorgement of the IMA and IMV, with an early contrast in IMV which suggested IMA to IMV AV fistula within the left hemipelvis. That suggested vascular malformation as the cause of the colorectal findings. Patient subsequently underwent embolization of 2 branches of IMA with stent placement in IMA, causing closure of the AV fistula. Patient tolerated the procedure without any complication (**Figure**).
Discussion: Ischemic colitis is most commonly seen in the watershed areas of the colon such as splenic flexure and rectosigmoid junction due to arterial anastomosis between the mesenteric arteries supplying the colon. In these situations, the colonic involvement is focal involves these specific segments. In this case, patient had diffuse gross ischemic findings from the distal rectum extending to descending colon involving the whole part of ischemic artery supply which is atypical for the distribution of colonic ischemia. In such situations, CT angiography comes as a diagnostic tool for identifying the pathology and in this situation it showed AV fistula between IMA and IMV which hampered the colonic blood supply to the extent to cause ischemic colitis with symptoms.



[2050] **Figure 1.** a. Early filling of dilated mesenteric veins (bottom arrow) with adjacent bowel wall edema due to venous congestion (top arrow) b & c. inferior mesenteric artery (arrows) adjacent to ill-defined area of contrast (dashed arrow) thought to represent arterio-venous fistula d. view from sigmoidoscopy showing ischemic colitis in the sigmoid colon.

S2051

Intestinal Spirochetosis: A Rare Cause of Chronic Watery Diarrhea

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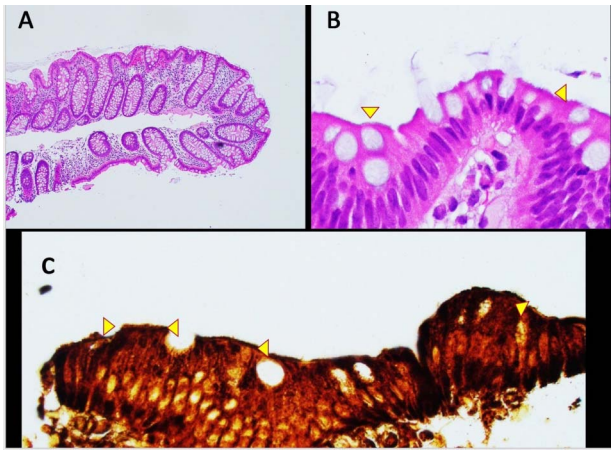
Introduction: Human intestinal spirochetosis (IS) is a condition defined histologically by the presence of spirochetal microorganisms attached to the apical cell membrane of the colorectal epithelium. Children, homosexual and HIV-positive patients are at higher risk. Prevalence rates of IS are low where living standards are high, in contrast to less developed regions where IS is relatively more common.
Case Description/Methods: Our subject is a 39-year-old male with a background history of HIV infection on treatment, with a viral load of 43 at the time of presentation and a CD4 count of 400. He presented with a large volume watery diarrhea, up to 4 liters a day, on and off for several weeks prior to his admission. The patient also had abdominal pain and cramping, in addition to an intermittent fever up to 102 F. The patient underwent a full work up including stool cultures that came back negative for Giardia, Cryptosporidium, Salmonella, Shigella, Campylobacter, and E. coli O157. The patient was also tested for *Clostridium difficile* twice and both came back negative. Colonoscopy was done for further investigation of the ongoing diarrhea and showed normal-looking colonic mucosa which was biopsied to rule out microscopic colitis. Pathology results came back with IS **(Figure)**. The patient was treated with metronidazole and with subsequent resolution of symptoms.
Discussion: The most common organisms causing IS in humans are Brachyspira spp, mostly commonly Brachyspira aalborgi and Brachyspira pilosicoli. These organisms are difficult to grow in artificial culture media and their pathogenicity is debated. A review of the literature suggests that invasion of spirochetes beyond the surface epithelium may be associated with gastrointestinal symptoms which respond to antibiotic treatment, whereas individuals lacking this feature may be mostly asymptomatic. Interestingly, the severity of symptoms does not seem to correlate with degree of immunodeficiency in HIV positive individuals. Rare cases of spirochetemia and multiple organ failure have been reported in critically ill patients with IS. Clinical suspicion to investigate and pathological knowledge of potential pathogenicity in certain clinical scenarios are keys in diagnosing and eventually treating IS.



[2051] **Figure 1.** A- At low magnification the colon appears normal (100X). B- At very high magnification the surface epithelium appears as if it had cilia, but these are spirochetes, colon does not have cilia (600X). C- The silver stain makes the organisms more apparent: black fuzzy surface (600X).

S2052

Ischemic Colitis and Its Association With Estrogen-Containing Oral Contraceptive Use

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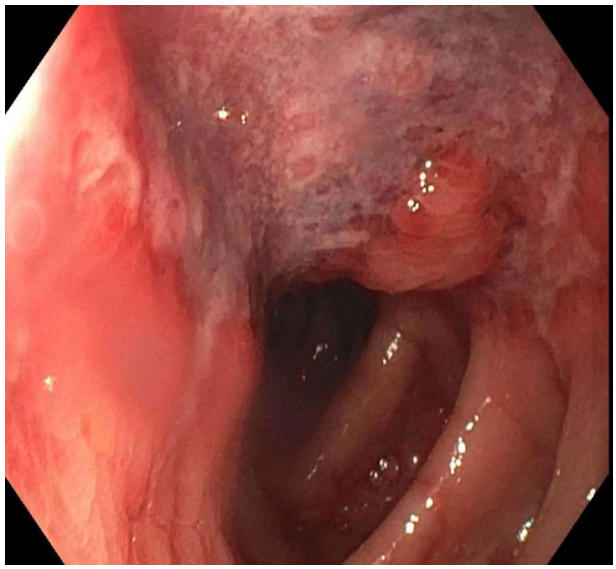
Introduction: Ischemic colitis (IC) is an uncommon condition with the incidence ranging from 4.4 to 44 per 100,000 person-years. Due to a lack of specific symptoms for IC, and the risk of progression to necrotic bowel without early recognition, a high index of suspicion is needed to identify IC in those below 50 years of age. While occlusive or non-occlusive etiology may cause IC, the role of oral contraceptives (OC) as a risk factor is unclear with conflicting case-control studies suggesting risk varying from 0.59-1.05. A single-institution study determined that half of the female patients with IC onset at less than 50 years of age were using oral contraceptives.
Case Description/Methods: A 45-year-old woman with a history of GERD, avascular necrosis of bilateral femoral heads, and long-term combined estrogen and progesterone containing OC use presented with a one-day history of abdominal pain and blood in her stools. Computed tomography (CT) of the abdomen and pelvis showed a patent abdominal aortic artery, SMA, and IMA, in addition to diffuse thickening of

the left colon, from the mid transverse colon through the sigmoid. Flexible sigmoidoscopy showed patchy, discontinuous areas in the descending colon and at the splenic flexure. Biopsy results from this area confirmed IC (**Figure**).

Discussion: This case highlights that IC should be considered in the differential of abdominal pain and blood in stools in premenopausal women. This is especially true in women before the 5th decade of life where spontaneous ischemic colitis is a disorder found almost exclusively in this population and is associated with the clinical use of exogenous estrogenic agents especially those taking OC. IC can be caused by arterial or venous thrombosis, and the role of OC in venous thrombosis is well-established. OCs affect plasma levels of procoagulant factors (VII, VIII, and IX), fibrinogen, prothrombin, anticoagulant, and fibrinolytic pathway proteins. In addition, OCs cause acquired activated protein C (APC) resistance and decreased protein S. Because of the altered hemostatic milieu, an episode of IC should lead to a revaluation of any future estrogen use.



[2052] **Figure 1.** Patchy, discontinuous areas of severely erythematous mucosa found in the descending colon and at the splenic flexure.

S2053

Iso Painful in My Belli

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Introduction: The etiology of diarrhea in patients with human immunodeficiency virus (HIV) is broad. Causes include antiretroviral therapy adverse events, opportunistic infections, malignancies, and progressive HIV. CD4 count and HIV viral load are important risk-assessment tools for infection. Stool studies including gastrointestinal pathogen polymerase chain reaction (GI PCR), C. difficile, and ova and parasites testing are instrumental. Microsporidia and Isospora are 2 causes of diarrhea in HIV patients for which testing is not included on GI PCR and ova and parasite testing. We present a case of a 57-year-old male with uncontrolled HIV and diarrhea found to have Isospora belli.

Case Description/Methods: A 57-year-old male with a medical history of HIV on Descovy and Prezcovix (CD4 90, VL 154K) presented to the hospital with a 5-week course of watery non-bloody diarrhea with intermittent nausea, vomiting, and a 20 lb weight loss. He reported having up to 5 watery diarrheal movements daily. His last colonoscopy was 2 years prior with no acute findings. On exam, he was afebrile with no abdominal tenderness. Prior to presentation, the patient was seen by his primary care physician for diarrhea, with 2 GI PCR panels and ova and parasite testing negative. Patient was prescribed ciprofloxacin and metronidazole by his physician with no improvement in symptoms. On hospital admission, labs were significant for Na/K/Cl of 130/3.3/110, venous blood gas with pH 7.27, CO2 31, HCO3 14.2, and WBC of 6.0. C-diff, CMV, Cryptococcus and repeat GI PCR were negative. Stool examination was positive for Isospora. Patient was initially treated with Bactrim 800-160 twice daily for 10 days with resolution of his diarrea. His HIV regimen was adjusted from Descovy and Prezcovix to Biktarvy for concern for resistance and nonadherence.

Discussion: Patients with HIV who present with diarrhea should be extensively worked up as etiology can be multifaceted with consideration for opportunistic infections, medication side effects, and worsening HIV disease burden. Isospora is an opportunistic protozoan parasite that can cause significant diarrhea and weight loss in HIV patients. It is more common in developing countries such as India and sub-saharan Africa and is rarely diagnosed in the United States. Thus, Isospora is not commonly part of the regular stool ova and parasite culture set and should be tested for in patients with high clinical suspicion.

S2054

It's a Bird! It's a Plane! No, It Is Endometriosis of the Bowel!

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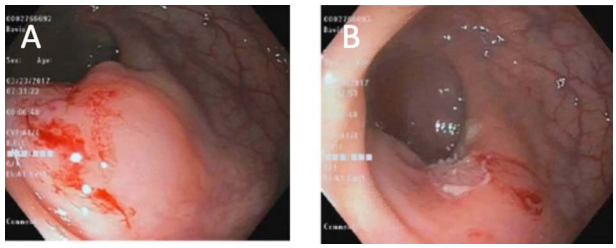
Introduction: Endometriosis affects approximately 10-15% of women of reproductive age and is associated with chronic pelvic pain and infertility though symptoms of intermenstrual bleeding, dysmenorrhea, dyspareunia, and dysuria can be experienced. The most affected extragenital location is the bowel. Bowel endometriosis (BE) is present among an estimated 12 to 37% of women with known endometriosis with 90% found in the rectum or sigmoid. Symptoms of BE include alterations in bowel habits including constipation, diarrhea, dyschezia, tenesmus, and rectal bleeding.

Case Description/Methods: We discuss a 50-year-old female with a history of ongoing menorrhagia presumed from fibroids despite uterine artery embolization with comorbid conditions including obesity, migraines, and depression referred by her PCP in 2017 for first colon cancer screening. Colonoscopy findings were notable for a 2 cm region of polypoid appearing tissue flat with central retraction observed at the distal rectal fold. The tissue was resected with endoscopic mucosal resection technique (**Figure**). Pathology revealed colonic mucosa with endometriosis. As a result of her endoscopic findings, she was diagnosed with endometriosis. She was trialed on oral contraceptives which did not improve her menorrhagia. She was seen in clinic for follow-up in 2022 and stated that her symptoms had resolved post menopause.

Discussion: We use this case to highlight BE and discuss the importance of including this underdiagnosed disease process in the differential diagnosis among women of reproductive age presenting to gastroenterology clinics. Symptoms of BE can mimic other gastrointestinal (GI) diseases such as inflammatory bowel disease or irritable bowel disease. Due to symptomatic overlap between BE and other GI disorders, it is often misdiagnosed leading to unnecessary workup and treatments. Any pelvic symptoms that appear cyclic in nature should raise the index of suspicion, and patients should be referred to gynecology for transvaginal ultrasound. If ultrasound is suspicious for BE, further work-up includes barium enema and magnetic resonance imaging to assess the severity and extent of disease. Our case is atypical in that colonoscopy is not sensitive in the diagnosis of BE as lesions are typically extrinsic to the bowel. Should medical therapy be initially pursued among women who are not seeking to conceive over surgical resection, colonoscopy should be undertaken to rule out malignant tumors prior to starting medical therapy.



[2054] **Figure 1.** A: 2 cm polypoid tissue in distal rectal fold B: Endoscopic mucosal resection of lesion.

S2055

Intra-Diverticular Polyp Associated With Acute Diverticulitis

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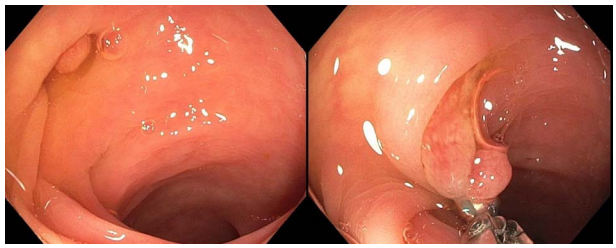
Introduction: The incidence of both colon polyps and diverticulosis increases with age. Intra-diverticular polyps are a very rare findings despite the relatively high prevalence of both colon polyps and diverticulosis. Acute diverticulitis happens in approximately 5-10% of patients with diverticulosis. Risk factors for acute diverticulitis have been well described including age, NSAIDs, and dietary factors. There is limited evidence on the incidence of diverticulitis associated with colon polyps.
Case Description/Methods: A 44-year-old woman with no significant medical history was referred for evaluation after a recent episode of acute uncomplicated diverticulitis confirmed on CT. She was treated with a short course of antibiotics in the outpatient setting. The patient had a normal BMI and was not using any NSAIDs previously. The patient subsequently underwent a diagnostic colonoscopy and was found to have sigmoid diverticulosis. A single 5 mm semi-pedunculated polyp was found arising from the base of a diverticulum (**Figure**). The polyp was resected using forceps to evert the diverticulum and fully visualize the polyp. Histologic examination revealed an inflammatory polyp.
Discussion: Here we present a case of a patient who was found to have an intra-diverticular polyp after an episode of acute diverticulitis. The patient had no other risk factors for acute diverticulitis which suggests the polyp may have been the underlying cause of the diverticulitis. Intra-diverticular polyps are rare. To the best of our knowledge, diverticulitis caused by such polyps is exceedingly rare. Polyp location or growth in the diverticulum may led to obstruction, inflammation or erosion of the thin diverticular wall. Because the polyp was inflammatory, we cannot rule out the possibility that it may have developed after the episode. Whether the polyp was the trigger or the result of diverticulitis, this rare association highlights the importance of a colonoscopy after an episode of acute diverticulitis to rule out other pathology.



[2055] **Figure 1.** Left: Intra-diverticular polyp. Right: Forceps were used to fully visualize and resect the polyp.

S2056

Incidental Gastrointestinal Stromal Tumor of the Rectum Found During Malignant Melanoma Follow-Up

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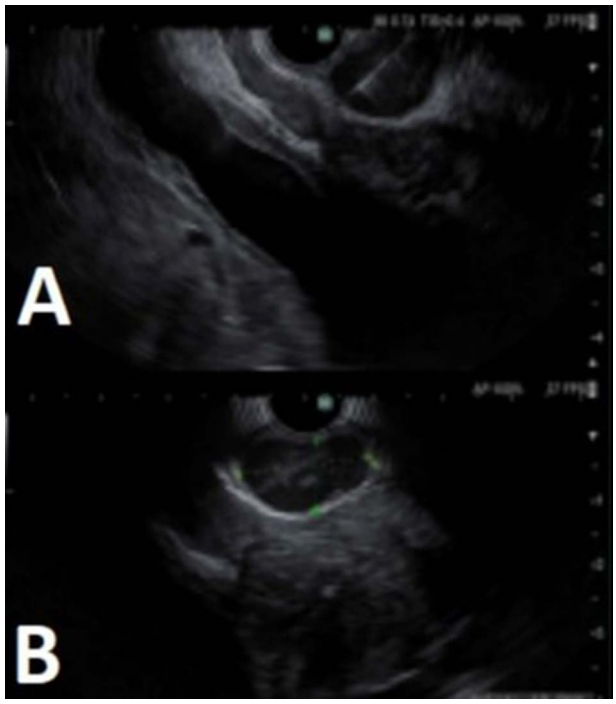
Introduction: Gastrointestinal stromal tumors (GISTs) of the rectum are a rarely reported phenomenon. The majority of GISTs occur in the stomach or the small intestine. Rectal GISTs encompass 5% of all GISTs and 0.1% of all rectal neoplasms, and generally occur in people over age 50. We present a rare case of rectal GIST occurring in a 48 year old male.
Case Description/Methods: A 48-year-old male with a history of malignant melanoma presented to the office with 1.5 cm anterior rectal mass discovered on positive emission tomography (PET) scan. He had no complaints and denied rectal bleeding, change in bowel habits and family history of colorectal cancer. Colonoscopy demonstrated a 2.0 cm submucosal nodule in the rectum. Endoscopic ultrasonography confirmed a hypoechoic, non-circumferential lesion predominantly on the left anterior rectal wall. The exact layer could not be determined, and an intact interface was seen between the lesion and the superficial mucosa suggesting lack of invasion. Histologic examination revealed spindle cell proliferation consistent with gastrointestinal stromal tumor. Spindle cells were positive for CD34, CD117 and DOG-1 supporting the diagnosis of GIST. The patient was instructed to follow up with medical oncology for further management (**Figure**).
Discussion: GIST of the rectum is a rare occurrence. The majority of GISTs occur sporadically, although some have been associated with genetic syndromes. The exact etiology of GISTs has yet to be determined but thought to be related to interstitial cells of Cajal and overexpression of KIT tyrosine kinase. Most GISTs originate from the muscularis propria and occasionally from the muscularis mucosa. Diagnosis of GISTs requires tissue analysis with the typical morphological features of spindle cell, epithelioid or pleomorphic mesenchymal tumors. CD117 immunohistochemical reaction supports diagnosis of GIST and predicts efficacy of tyrosine kinase inhibitor therapy. GISTs have also been associated with DOG-1, CD34, desmin, S100, alpha smooth muscle actin expression. CT scan with contrast is the gold standard for detection of GISTs, and guidelines for the treatment of GISTs have not yet been established due to the rarity of the disease. The current standard of care for treatment includes surgery for primary disease and additionally Imatinib for metastatic disease. While there is limited information regarding rectal GISTs, this case illustrates symptomatology and progression of this rare malady.



[2056] **Figure 1.** Endoscopic ultrasound with fine needle aspiration of rectal lesion.

S2057

Large Bezoar With Partial Colon Obstruction Secondary to Chronic Opioid Use, Required Surgical Intervention

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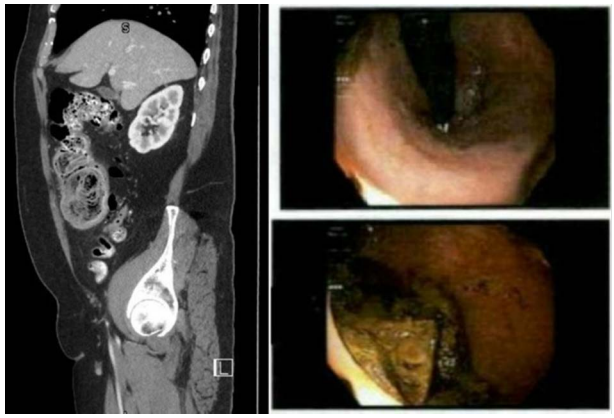
[1]Rutgers Health/Trinitas Regional Medical Center, Elizabeth, NJ; [2]AIN Shams University Hospital, Abbasia, Al Qahirah, Egypt; [3]Trinitas Regional Medical Center, Elizabeth, NJ; [4]RWJ Barnabas Health/Trinitas Regional Medical Center, Elizabeth, NJ.

Introduction: Bezoars are solid masses of indigestible materials that accumulate in the gastrointestinal tract (GIT). They are classified according to their content and sites in the GIT. We present a case of large bowel partial obstruction secondary to bezoar, attributable to chronic opioid use.
Case Description/Methods: A 65-year-old male with a history of hypertension, occasional constipation with unremarkable colonoscopy 2 years ago, spinal stenosis with fully functioning activity on chronic opioid use for 10 years, presented with worsening abdominal pain and distension with small bowel movements for 5 days. He reported nausea with no vomiting. Physical exam showed normal vital signs and distended soft abdomen with no tenderness or guarding. CT abdomen showed 10 x 6 cm partially obstructing bezoar in the proximal transverse colon, with decompressed distal colon, and with no small bowel obstruction (**Figure).** He was started on different laxatives and enemas for 3 days with no improvement. Colonoscopy showed a large obstructing stoolball (**Figure)** that was not getting fragmented by polypectomy snares, tripod forceps, or water piks. Surgical removal of the bezoar was then performed with primary anastomosis. He remained stable and was discharged on Senna with instructions for a follow-up colonoscopy, and to avoid opioids.
Discussion: Bezoars are uncommon causes of GIT obstruction. They are classified according to their content into phytobezoars (indigestible food particles), trichobezoars (hair and food particles), and pharmacobezoars (concretions of different medications). They commonly occur in the stomach, however; they can occur in any part of the GIT. Bezoars' common risk factors are altered GIT anatomy or motility such as post abdominal surgery, diabetic gastropathy, Guillain-Barre syndrome, bedridden state, and medications with intestinal hypokinetic effects. Chronic opioid use is the culprit risk factor in our patient. GIT obstruction is a common complication of bezoars although it rarely occurs in the colon. A plain radiograph is usually the first diagnostic modality, however; a CT abdomen is often needed. Management varies from medical to endoscopic or surgical according to the bezoar's size and the associated complications. Our patient was treated surgically after failed medical and colonoscopic treatment. This raises the importance of the concomitant use of stimulant laxatives with opioids and avoiding chronic opioid use in unnecessary conditions to prevent such complications.



[2057] **Figure 1.** On the left, the CT abdomen shows a large proximal transverse colon bezoar. On the right, the colonoscopy shows a large stoolball.

S2058

Look What the Cat Dragged In! Community-Acquired Clostridiodes difficile Infection From a Household Cat

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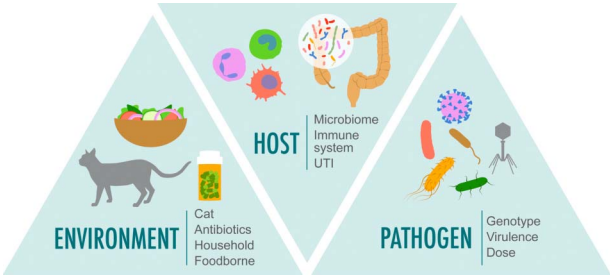
Introduction: Risk factors for *Clostridiodes difficile* infections (CDI) classically include antibiotic exposure, hospital or nursing home stays, inflammatory bowel disease, or weakened immune systems. However, there is an increasing incidence of community-associated CDI (CA-CDI) in persons without these risk factors. This rise in incidence has implicated natural reservoirs, such as zoonosis. Our case describes a recurrent CA-CDI acquired from a household cat.
Case Description/Methods: A 31-year-old woman with 1 week of fever and diarrhea, reporting 4 loose, non-bloody bowel movements per day, associated with abdominal cramps, nausea, and vomiting. Medical history included endometriosis and recurrent urinary tract infections (UTIs) . She completed 7 days of ciprofloxacin 3 days prior to presentation. She denied prior hospitalizations, surgeries, enteric infections, or family history of immune-mediated conditions or IBD. Physical exam: T 102 F, HR 133 BPM, RR 22 BPM, normotension, minimal abdominal tenderness and no guarding. WBC count was 13,950 cells/μL, lactic acid 2.8 mg/dL, and UA revealed a trace leukocyte esterase. Urine culture was negative, but she received 2 days of IV antibiotics for a suspected UTI. Stool PCR was positive for *C. difficile* and she received oral vancomycin for 14 days. One month later, a trial taper of vancomycin and fidaxomicin was given for recurrent *C. difficile*. Of note, she adopted a stray cat one month prior to symptom onset; her cat's stool tested positive for *C. difficile*. 5 months after the initial infection, she was referred for colonoscopy and treated with bezlotoxumab with minimal improvement; now with a plan to pursue FMT.
Discussion: *C. difficile* acquisition from a household cat represents a novel presentation of CA-CADI. The interaction between the host, their environment, and the infectious agent is key to this case (**Figure).** In this case we believe that antibiotic use permitted seeding of her GI tract by *C. difficile* acquired from her cat. This is supported by the close temporal relationship between the cat's adoption and symptom onset. Evidence that humans can pass *C. difficile* to cats makes it more likely that her multiple recurrent CA-CDIs derived from this natural reservoir. This case emphasized the importance of history taking, contact (pet) tracing, reduction in excessive antibiotic use and proper instruction on sterilization of household surfaces in recurrent CA-CDI.



[2058] **Figure 1.** This graphic depicts the epidemiological triangle of infectious disease. Focusing on the interaction between the host, the environment and the pathogen can help us understand this rare case of community acquired C. difficile.

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1. Tsai CS, Hung YP, Lee JC, Syue LS, Hsueh PR, Ko WC. *Clostridioides difficile* infection: an emerging zoonosis? Expert Rev Anti Infect Ther. 2021 Dec;19(12):1543-1552

S2059

Longstanding Proctocolitis Secondary to Chronic Inferior Mesenteric Vein (IMV) Occlusion

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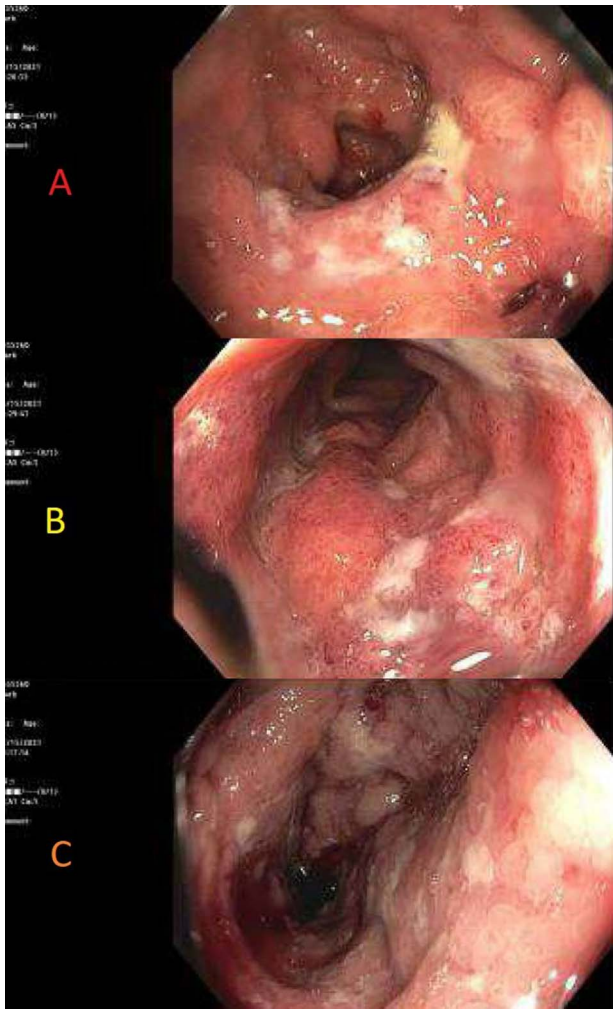
[1]Jefferson Health Northeast, Philadelphia, PA; [2]Kansas University Medical Center, Kansas City, KS; [3]University of Kansas Medical Center, Kansas City, KS.

Introduction: Inferior mesenteric vein thrombosis (IMVT) is an exceedingly rare condition which typically occurs as a complication of diverticulitis, hypercoagulable states, inflammation or malignancy. The IMV drains blood from the descending colon, sigmoid colon and rectum. Patients with IMVT often present with ischemic colitis affecting these areas. In this case, we present a 43-year-old male with recurrent proctocolitis who was ultimately found to have chronic IMVT due to an underlying hypercoagulable disorder.
Case Description/Methods: A 43-year-old male with a past medical history of DM, HTN, renal transplant on immunosuppression, prothrombin gene mutation and DVT on apixaban initially presented with rectal pain and diarrhea of one month duration. Patient denied sick contacts, recent travel, antibiotic use, history of inflammatory bowel disease (IBD), prior EGD or colonoscopy. CT revealed findings concerning for proctocolitis and CTA was negative for mesenteric occlusion. Labs remarkable for elevated CRP and ESR. Initial colonoscopy showed diffuse severe, inflammation with congestion, erosions, friability, granularity and shallow ulcerations in rectum and recto-sigmoid colon. Biopsies revealed surface erosions, ulceration, crypt attenuation, crypt cytoplasmic mucin loss, vascular proliferation and hyalinization suggestive of ischemic colitis. Biopsies were negative for CMV, HSV, IBD, sevelamer crystals or microangiopathy and infectious stool studies were negative. He was started on linaclotide, mesalamine enemas, and hydrocortisone enemas. Over the next 3 months, patient had numerous readmissions for worsening symptoms with repeat colonoscopies showing similar findings of ischemic colitis. Although initial imaging showed no mesenteric occlusion, IR mesenteric angiogram was eventually performed which revealed chronic occlusion of the IMV with filling of a sigmoid varix and retrograde filling of smaller sigmoidal and hemorrhoidal veins. Patient declined surgical intervention and was advised evaluation for IR angioplasty. He was discharged on a strict bowel regimen and endorsed symptomatic improvement at follow up several months later (**Figure**).
Discussion: IMVT is an exceptionally rare entity which often results as a complication of inflammatory states such as diverticulitis. Although diverticulitis is the most common cause of IMVT, hypercoagulable disorders must remain an important differential diagnosis. Early detection of IMVT can decrease both morbidity and mortality while effectively guiding therapy.



[2059] **Figure 1.** A) Diffuse severe inflammation with mucosal friability and granularity of the descending colon B) Diffuse severe inflammation with mucosal friability and erosions in sigmoid colon C) Diffuse severe inflammation with congestion, friability, and shallow ulcerations in rectum with oozing.

S2060

Localized Lymphoid Hyperplasia of the Colon Mimicking MALT-Lymphoma in a Patient With Ulcerative Colitis

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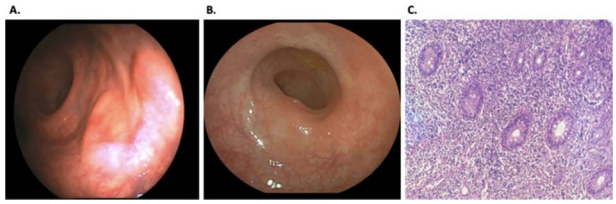
Introduction: Localized lymphoid hyperplasia (LLH) of the colon, also known as rectal tonsil, is a rare clinical entity. When present, LLH almost always presents in the rectum. LLH can appear as a polyp of varying sizes, nodule, or a mass. Rectal bleeding is usually the most common presenting symptom of LLH. In most cases, LLH resolves without any intervention; however endoscopic differentiation from extra-nodal marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT) is challenging. We present a case with ulcerative colitis (UC) having a diagnosis of LLH of rectum.
Case Description/Methods: A 54-year-old male with a history of ulcerative colitis for 6 years was admitted to our hospital after an observation of abnormal metabolic activity in the rectum on a positron emission tomography/computed tomography (PET/CT) scan. He had a past medical history of squamous cell carcinoma of the lung, for which he underwent resection 16 years prior to his present admission. In his subsequent follow-ups, the present PET/CT scan was performed and he was consulted to our division. His UC was under remission and he had no symptoms. His laboratory tests were unremarkable and CMV viral tests were negative. His medications included oral mesalamine 4 g/d. He never required steroids or any immunomodulatory therapy. A decision to perform a colonoscopy was made. A horseshoe-shaped area with ulceration in the middle was observed in the rectum. Multiple biopsies were taken. Histopathological analysis revealed superficial mucosal fragments of lymphoid hyperplasia between lamina propria and submucosa. Cytokeratin AE1/AE3 immunostaining was negative, and dysplasia was not present. The patient was diagnosed with LLH of the rectum. A control colonoscopy was scheduled for 3 months later, and the regression of the lesion was observed (**Figure**).
Discussion: Despite rectal bleeding being the most common presentation of LLH, patients can be asymptomatic, as seen in our case. LLH is usually considered a benign lesion, however some reports suggest its association with MALT-lymphoma. Histopathological analysis is essential to exclude a malignant process, and to make the correct diagnosis.



[2060] **Figure 1.** A: Horseshoe-shaped area with ulceration in the middle in rectum. B: Control rectoscopy showed no lesion. C: Hematoxylin-eosin staining of the lesion shows lymphoid nodular hyperplasia.

S2061

Looks Aren't Everything: A Rare Case of Metastatic Colonic Neuroendocrine Tumor

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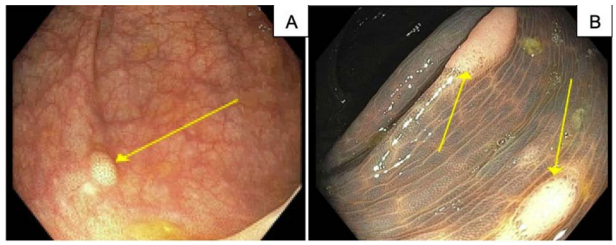
Introduction: Gastrointestinal neuroendocrine tumors (NETs) are rare, slow growing tumors with distinct histopathological characteristics. Endoscopically, they appear as sessile, flat polypoid lesions, making them difficult to distinguish from pathologically benign polyps. They can be found anywhere within the gastrointestinal tract with the terminal ileum being the most common location. Severity of disease varies based on size, macroscopic ulcerations, and hyperemia of mucosal surfaces. NETs of the colon and rectum are extremely rare and account for only 1% of all colorectal malignancies. Patients typically remain asymptomatic until the tumor is large enough to cause obstruction or abdominal pain and is diagnosed during routine colonoscopy.
Case Description/Methods: We present a 63-year-old male with a past medical history of hypertension, hyperlipidemia, and parathyroidectomy, who on colonoscopy in 2019 had 3 benign-appearing polyps showing mixed hyperplastic and tubular adenoma morphology. Three years later, repeat colonoscopy revealed 5 sessile polyps of varying sizes from 2 mm to 6 mm, where all were completely resected. Pathology showed 4 tubular adenomas and a 2-millimeter low grade (WHO 2010 Grade 1) well-differentiated neuroendocrine tumor located in the sigmoid colon. The latter exhibited typical findings of NETs with a trabecular growth pattern, round nuclei, and a "salt and pepper" chromatin. Ki-67 proliferative index was 1%. Tumor cells were positive for synaptophysin, and chromogranin, and negative for CK7, CK20 and CDX2. PET scan demonstrated intensely DOTATATE avid mural thickening at the duodenal bulb and proximal second portion of the duodenum, along with uptake in liver, and pulmonary nodules, with osseous lesions suspicious for metastatic disease. Repeat colonoscopy 2 months later was unrevealing without evidence of neuroendocrine tumor (**Figure** 1).
Discussion: Colorectal NETs are rapidly progressive with a poor prognosis compared to colorectal adenocarcinoma. Our case demonstrates that low grade, well differentiated NETs of the colon can undergo rapid high-grade transformation within a short interval between colonoscopies. When considering NETs without known metastatic disease, lesions that are amenable to endoscopic resection may be treated with endoscopic intervention and surveillance alone. Given rapid progression of disease and predilection for metastasis, our case highlights the need for early detection of NETs with interval screening colonoscopies to decrease morbidity and mortality.



[2061] **Figure 1.** Image A: 3 mm polyp located in the sigmoid colon. Appears sessile and flat with no malignant appearing lesion. Image B: 2 polyps located in the transverse colon, 3 mm and 5 mm in size, which endoscopically appear similar to image A. Pathology is consistent with tubular adenoma.

S2062

Metastatic Cholangiocarcinoma Presenting as Colonic Obstruction: A Case Report

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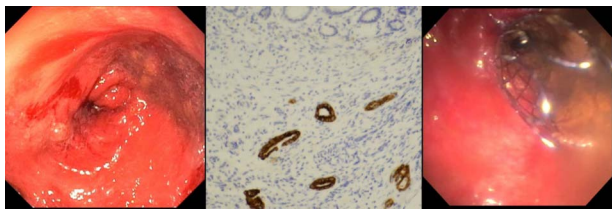
Introduction: Cholangiocarcinoma (CCA) is an aggressive malignancy of the biliary epithelium. Most patients present with unresectable disease. Metastatic spread is typically via the lymphatic system, most commonly found in the lungs, adrenal glands, and brain. We present a case of CCA metastases to the colon resulting in obstruction.
Case Description/Methods: A 67-year-old white female with history of poorly differentiated CCA status post left hepatectomy and right hepaticojejunostomy 4 years previously, complicated by an umbilical cutaneous metastasis 1 year previously, presented with intractable nausea, vomiting and abdominal pain with moderate distention. CT scan revealed marked retained fecal material with increased pelvic ascites. Diagnostic flexible sigmoidoscopy with biopsies of the high-grade sigmoid stricture was histologically revealing for metastatic carcinoma consistent with a cholangiocarcinoma primary. She subsequently underwent therapeutic sigmoidoscopy with a GIF-XP190 neonatal gastroscope which was advanced to 15 cm where the near complete colonic occlusion was observed. The 5.4 mm scope traversed with resistance under fluoroscopic guidance. The neonatal scope was exchanged for a GIF-2T160 therapeutic gastroscope to pass a 0.035 mm × 450 cm guidewire across the stricture. A 9/12 mm extractor balloon was deployed over the wire and inflated to 12 mm to mark both proximal and distal ends of the stricture while Omnipaque contrast was injected under fluoroscopy to estimate the length of the stricture as 3.5 cm. The balloon catheter was exchanged for a Boston Scientific uncovered 22 mm x 90 mm colonic Wallflex stent. Liquid stool immediately began to drain across the stent decompressing the colon. The patient was able to tolerate a diet and regain normal bowel function without complication, until passing away in hospice care 9 months later (**Figure** 1).
Discussion: To our knowledge, this is the seventh case of metastatic CCA to the colon reported in the international literature. Our patient presented with colonic obstruction, consistent with previous reports of CCA metastases to the colon as submucosal infiltration results in stricture formation. In this case, CK7+, CK20- staining suggest a 100% positive predictive value for the diagnosis of metastatic CCA. Given the unresectable nature of the disease, palliative colonic stent was used to relieve the pain of colonic obstruction and improve the quality of life.



[2062] **Figure 1.** Left: colonic stricture Middle: CK7+ 200X. Right: liquid stool draining across an uncovered 22 mm × 90 mm Wallflex colonic stent.

S2063

Mantle Cell Lymphoma Presenting as Multiple Lymphomatous Polyposis of the Colon

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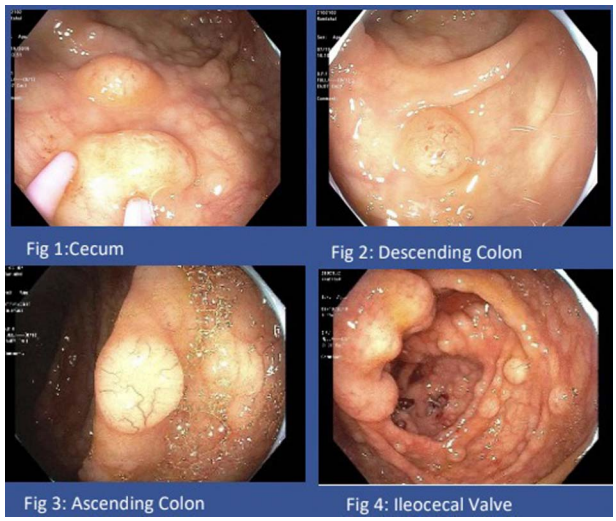
Introduction: Mantle Cell Lymphoma (MCL), a type of non-Hodgkin lymphoma (NHL) is an aggressive neoplasm affecting the lymphatic system. Its incidence is 1–2 cases/10^5 people/year and accounts for only 5-6% of all cases of NHL. Multiple lymphomatous polyposis (MLP) is a rare presentation seen in MCL consisting of diffuse nodules or polyps covering multiple sites of the gastrointestinal tract.
Case Description/Methods: A 68-year-old female with a past medical history of hypertension presented to the clinic with a one-year history of mild diffuse abdominal pain, change in bowel habits including loose stools, and significant involuntary weight loss. A review of systems, physical examination, and routine blood work was non-remarkable. The upper endoscopy was normal but a colonoscopy revealed numerous 1-10 mm submucosal nodules in the entire colon. Biopsies obtained from the nodules of the colon revealed colonic mucosa infiltrated with monotonous, small to medium-sized lymphocytes with irregular nuclear contour, and scant cytoplasm. Immunohistochemistry and immunophenotypic analysis were positive for CD20, CD5, Cyclin D1, BCL6, BCL 2, SOX 11, and negative for CD 10, and P 53. FISH testing revealed 11,14 translocations, consistent with Mantle Cell Lymphoma. CT scan of the abdomen showed pre-carinal, right hilar, extensive para-aortic, and mesenteric lymphadenopathy consistent with stage 4 Mantle Cell Lymphoma. She was subsequently started on Bendamustine and Rituximab combination therapy followed by Rituximab for maintenance. There was a significant improvement in her clinical status with progressive weight recovery. Follow-up upper and lower endoscopic examinations after 6 cycles revealed complete remission with the absence of all polypoid lesions in the GI tract (**Figure** 1).
Discussion: The initial presentation of MCL can widely vary from being asymptomatic to having systemic symptoms of fever and weight loss to marked lymphadenopathy on physical examination. Although 15-30% of individuals with Mantle cell lymphoma (MCL) are reported with involvement in the gastrointestinal (GI) tract, MLP is seen only in less than 10%. It is important for clinicians to not only incorporate MCL as a differential in their workup when they come across diffuse polyps in the GI tract but also to differentiate it from other similar disease processes that present with multiple polyps in the colon. A definitive diagnosis of MLP requires biopsy and histological examination of the tissue with immunophenotypic and immunohistochemistry analysis.



[2063] **Figure 1.** Multiple sessile polypoid lesions of different sizes throughout the colon.

S2064

Mantle Cell Lymphoma of the Cecum in an Asymptomatic Patient

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Introduction: Mantle cell lymphoma is a rare B-cell Non-Hodgkins lymphoma that involves the gastrointestinal tract with the typical findings of a mass lesion associated with multiple other lymphomatous polyps.
Case Description/Methods: We present a 73 year old woman with a history of hypertension who presented for a surveillance colonoscopy. She had a tubular adenoma removed 5 years prior and presented without any overt gastrointestinal signs, symptoms or evidence of weight loss. On colonoscopy a large lobulated mass lesion was noted in the cecum, and biopsies confirmed it to be a malignant B-cell lymphoma, mantle cell type. Immunohistochemical staining showed an atypical lymphoid infiltrate CD20+, PAX-5+ and diffusely positive for CD5, CD43, cyclin-D1 and BCL-2 and negative for CD3, CD10, pankeratin and BCL-6, with a proliferation index of 35%. A CT showed a large mass involving the cecum, ileocecal valve and possibly the distal aspect of the terminal ileum, as well as large right lower quadrant, periportal and gastrohepatic lymphadenopathy. Oncology service initiated chemotherapy with rituximab, cyclophosphamide, doxorubicin, vincristine and prednisone (R CHOP) and after 3 cycles a repeat PET/CT showed complete regression with resolution of the cecal and ileal mass as well as all previously noted lymphadenopathy. The patient has remained asymptomatic throughout the process and continues to be clinically stable and disease free 16 months after her initial diagnosis.
Discussion: Mantle cell lymphoma generally has a poor prognosis and typically does not present as an isolated cecal mass without evidence of other colonic involvement of multiple lymphomatous polyps. This case demonstrates that a solitary colonic mantle cell lymphoma can be found as an incidental finding, in an asymptomatic patient, with total resolution of the lymphoma after appropriate treatment.

S2065

Lipoma!, Leading Point of a Colonic Intussusception

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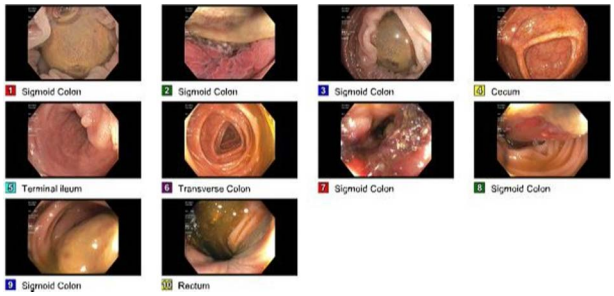
Introduction: Intussusception is Intestine telescoping into itself. Commonly benign, self resolving condition seen in children more often. Presentation in adults is rare. It represents 1-5% of all obstructions and intussusceptions. It is commonly associated with a definable lead point in about 70-90% of the cases. There is no exact explanation of the events but luminal location of a mass plus the presence of food in the GI tract contribute to the telescoping event to the distal bowel.
Case Description/Methods: A 47-year-old woman with history of anxiety and constipation, presents with 2 weeks of constipation along with recent abdominal pain, nausea, liquid bowel movements, decreased stool caliber, melena, and hematochezia. Denies weight loss. No surgeries or cancer history. No previous endoscopies. CT scan showed a descending colon to sigmoid intussusception with a possible polyp vs diverticulum as the lead point. Intussusception spanning approximately 12.7 cm in length. Patient underwent colonoscopy which revealed a large partially obstructing circumferential, firm, mobile mass in mid sigmoid colon with no bleeding. There was mucosal congestion, superficial areas of erosion but no necrosis or perforation most likely being the site of intussusception appreciated on CT. Diverticula was also found. Partial colectomy was performed. Intraoperatively, tumor involvement at the splenic flexure was noticed. Post operative course was uneventful. The patient was discharged home with no complications. Eventually, biopsy revealed an infarcted intramural lipomatous tumor, 5.5 cm in dimension, completely resected. Peritumoral intra and extramural abscess, and chronic active sclerosing mesenteritis. Diverticulosis without perforation. No evidence of malignancy (**Figure** 1).

Discussion: Colon Intussusception in adults is commonly associated with malignancy or underlying lesions. The incidence of intussusception is about 5% and only 1/4th are symptomatic. The presentation is non-specific and episodic and thus, is difficult to diagnose. It mainly presents with abdominal pain, constipation, bleeding or diarrhea, and severe complications are complete obstruction, perforation, sepsis, ischemia, necrosis, and recurrence. CT imaging is definitive in diagnosis. Surgical intervention is the mainstay management. Prognosis depends on the underlying lesion. The mortality rate is 50% with underlying malignant lesions.



[2065] **Figure 1.** Colonic Mass. Intussescepted bowel.

S2066

Leptomeningeal Carcinomatosis in Metastatic Colorectal Adenocarcinoma

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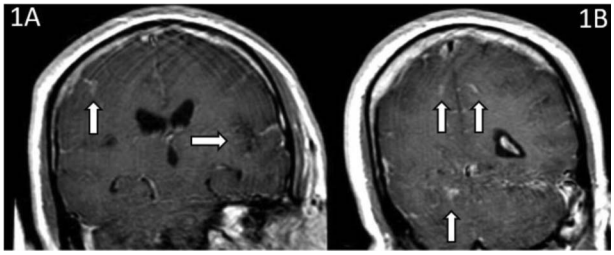
Introduction: Leptomeningeal Carcinomatosis (LMC) is a rare and late presentation of metastatic carcinomas of a wide variety. Colon malignancies make up a very small portion of these cases. A recent retrospective review by the Mayo Clinic of their leptomeningeal carcinomatosis database found only 0.05% of 17,000 cases to be related to colon cancers. Signet ring adenocarcinoma of the colon account for a small fraction of colon malignancies, approximately 0.16 per 100,000 cases.
Case Description/Methods: A 57-year-old male presented with chief complaint of progressive headaches over several weeks. He was diagnosed with colon cancer via inguinal lymph node biopsy which favored adenocarcinoma of colorectal origin one year earlier. Subsequent colonoscopy confirmed adenocarcinoma with signet cell features. PET scan showed diffuse retroperitoneal adenopathy. He 12 cycles of chemotherapy. After therapy, imaging revealed decreased adenopathy and his Carcinoembryogenic Antigen (CEA) was stable. Post treatment CT demonstrated no metastatic disease (**Figure** 1). A brain MRI was ordered for headaches and was remarkable for leptomeningeal enhancement. Cerebrospinal fluid (CSF) revealed neoplastic cells. CSF and serum CEA levels were elevated. This confirmed the diagnosis of leptomeningeal carcinomatosis secondary to colon adenocarcinoma. The decision was made to attempt palliative chemotherapy with intrathecal Methotrexate. Unfortunately the patient's mentation continued to decline despite treatment and family decided on hospice.
Discussion: Leptomeningeal carcinomatosis (LMC) is a late manifestation of metastatic malignancy which occurs in approximately 5 percent of cases. Solid tumors are more likely to metastasize to the meninges than those of hematologic origin, most commonly breast and lung. Gastrointestinal malignancies are thought to be responsible for approximately 4-14% of cases. The incidence is much more rare in colorectal carcinoma (CRC), especially with signet cells features. A recent retrospective review from the Mayo Clinic database of over 17,000 patients with primary CRC between 2000 and 2014 found just 10 patients (0.058%) to have leptomeningeal involvement. Due to the rarity of CRC with LMC, there is no definitive treatment. In present literature, intrathecal chemotherapy was not performed due to rapid patient decline or simply because of the advanced disease progression at the time of diagnosis. Previous reports have discussed radiation therapy alone being used with the goal in mind of improving neurologic symptoms.



[2066] **Figure 1.** A, Coronal post contrast T1 weighted image demonstrating nodular leptomeningeal enhancement in both cerebral hemispheres B, Leptomeningeal enhancement in the cerebellum (bottom arrow) as well as bilateral cerebral hemispheres (top arrows).

S2067

Mesalamine Hypersensitivity Induced Hemorrhagic Shock

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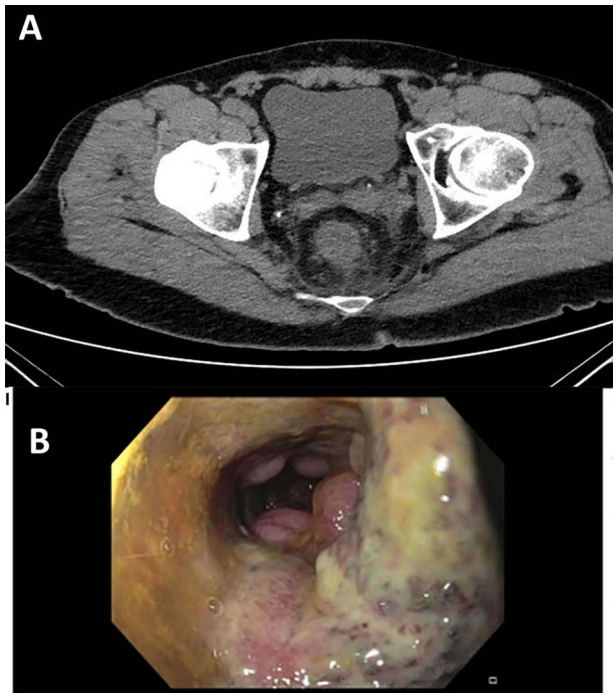
Introduction: 5-Aminosalicylic acid (mesalamine) rarely induces hypersensitivity. It is first line therapy for treatment of ulcerative proctitis. However, the journal of gastroenterology and hepatology states 12% of patients are unable to tolerate mesalamine or other compounds of 5-aminosalicylic acid. The most common side effects are identified as headache, nausea, abdominal pain, and mild watery diarrhea. This case report highlights the importance of recognizing mesalamine hypersensitivity in patients with ulcerative colitis.
Case Description/Methods: A 62-year-old man with history of hypertension, hyperlipidemia, chronic kidney disease stage 3B and ulcerative proctitis presented to the ED with abdominal pain (intensity 9/10), rectal pain, tenesmus, flatulence, persistent bloating, and bright red blood per rectum of 2 months duration. Colonoscopy showed diffuse moderate mucosal changes with congestion, erythema, friability, and loss of vascularity in the rectum extending in a contiguous fashion from 10 cm to anal canal. Pathology reported nonspecific chronic inflammation with hyperplastic epithelial changes but negative for dysplasia or malignancy. He began oral mesalamine and mesalamine suppository therapy. With symptomatic improvement he was discharged home and was readmitted 3 days later with worsening hematochezia. He began intravenous steroids and his mesalamine therapy was changed to balsalazide. During the next 24 – 48 hours, he started having increased hematochezia with blood clots associated with increased rectal pain (pain scale 10/10). His vital signs were recorded as temperature 97.3F, blood pressure 58/32, heart rate 42, respiratory rate 9 and saturation of 86% on room air. His hemoglobin dropped from 9.6 to 7.7. He was resuscitated with IV fluids and PRBC transfusion. His blood pressure and heart rate normalized. At that point he was diagnosed with 5-ASA hypersensitivity. All his mesalamine products were discontinued and hydrocortisone suppositories began with continuation of his IV steroids. He improved and was discharged home with a steroid taper and daily hydrocortisone suppositories (**Figure** 1).
Discussion: 5-aminosalicylic acid (mesalamine) is currently the first line therapy for treatment of ulcerative proctitis. Although mesalamine hypersensitivity is not common, it is important to include it in the differential diagnoses of patients with pertinent inflammatory bowel disorders who present with worsening clinical symptoms after introduction to mesalamine or similar 5-aminosalicylic acid compounds.



[2067] **Figure 1.** A, CT A/P w/o IV contrast demonstrating edematous rectum with perirectal fat stranding suggesting proctitis. B, diffuse area of severely hemorrhagic and ulcerated mucosa in the rectum.

S2068

Malignant Colo-Duodenal Fistula in a Rare Anatomic Position

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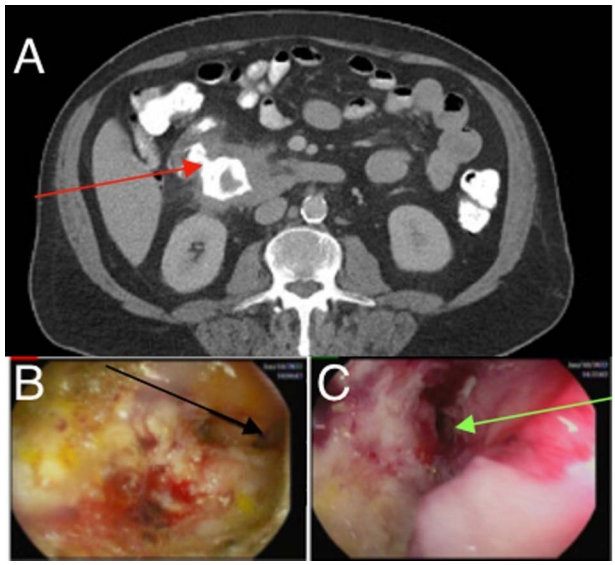
Introduction: The first case of malignant colo-duodenal fistula (MCDF) was reported in 1862 and since then only 70 MCDF cases had been reported. We describe a case of MCDF between the hepatic flexure and second part of the duodenum, a rarely observed anatomic location.
Case Description/Methods: A 63-year-old male presented to an outside hospital with lethargy and a weight loss of 30 lbs over 3 months without any overt GI bleed and was found to be anemic. He had RUQ rebound tenderness and a positive stool occult blood test. A large duodenal ulcer was found on EGD that was concerning for malignancy. He was subsequently transferred to our hospital for further evaluation. CT abdomen showed a contrast-filled fistulous communication with associated circumferential wall thickening and luminal narrowing between the duodenum and the colon. Scattered noncalcified pulmonary nodules in both lungs were also observed. A repeat EGD showed a large, partially circumferential, friable ulcer in the first part of the duodenum with a fistulous tract connecting to the colon. A colonoscopy showed a fistulous tract with surrounding ulceration and adenomatous-appearing mucosa in the hepatic flexure of the colon connecting to the duodenum. The endoscope could not be advanced safely beyond the hepatic flexure due to edema around the fistulous tract. Pathology revealed invasive moderately differentiated adenocarcinoma with ulceration and detached fragments of small intestinal and colonic mucosa in the duodenal biopsies and invasive moderately differentiated adenocarcinoma with cells that were CK20+, SATB2+, and CK7− consistent with metastatic colorectal cancer in the colon biopsies. Surgical and medical oncology were consulted for management (**Figure** 1).
Discussion: Most MCDF involve the second portion of the duodenum. In our patient, the fistula connected the first portion of the duodenum to the hepatic flexure of the colon. Although, 20% of hepatic flexure tumors are adherent to the duodenum, very few fistulate into it. Cross-sectional imaging with contrast studies help confirm and stage the primary tumor and fistulous tract by delineating extent of local invasion and evaluating for metastatic spread. Upper and lower endoscopy help demonstrate the fistulous communication and biopsy allows for a pathological diagnosis. Definitive treatment involves a surgical resection of the primary malignancy. However, but once the disease has progressed to point of fistulization or metastases, the overall prognosis is poor.



[2068] **Figure 1.** A, CT Abdomen with contrast showing colo-duodenal fistula (red arrow) B, EGD showing fistula in 2nd part of the duodenum (black arrow) and ulceration. C, Colonoscopy showing fistula (green arrow) in the hepatic flexure with ulceration and edema.

S2069

Mycophenolate Mofetil (MMF)-Induced Hemorrhagic Colitis with Safe Reintroduction of Alternative Low Dose Enteric-Coated Mycophenolate Sodium (EC-MPS)

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Introduction: Mycophenolate mofetil (MMF) is a common immunosuppressant used in patients with solid organ transplant. MMF is associated with gastrointestinal toxicities such as diarrhea, nausea, and vomiting. MMF induced colitis is a rare but serious morbidity which often presents with diarrhea, pain, and hematochezia. It is characterized by endoscopic and histologic changes resembling inflammatory bowel disease, self-limited colitis, and graft-versus-host disease. There are no specific treatment guidelines for MMF-induced colitis, but generally symptoms resolve following discontinuation of MMF. It is unclear if colitis would recur with the use of alternative enteric-coated mycophenolate sodium (EC-MPS).
Case Description/Methods: A 36 y/o M with kidney transplant in 2015 on tacrolimus, prednisone, and oral MMF 500 mg twice a day presented with hematochezia, loose stools, and abdominal discomfort. Patient was hemodynamically stable and anemic (Hgb of 12.4 g/dL). Hepatitis B serology, stool culture, ova and parasite, herpes II IgG, QuantiFERON gold, C.Diff, and tissue transglutaminase IgA were negative. Cytomegalovirus (CMV) IgG and herpes I IgG were positive. Fecal calprotectin (FCP) and CRP were elevated to 3250 mcg/g and 45.9 mg/L respectively. Colonoscopy revealed diffuse eroded mucosa with spontaneous hemorrhage. Biopsies showed active colitis without chronic changes or evidence of CMV. Patient was diagnosed with MMF induced hemorrhagic colitis. MMF was discontinued in favor of Azathioprine (AZA) 100 mg daily. Symptoms completely resolved. Follow-up routine screening donor-specific antibody (DSA) screen revealed strong de-novo DSA and biopsy revealed antibody mediated rejection. For this, he received high dose IV methylprednisolone, IVIG, and plasmapheresis. AZA was replaced by enteric coated oral EC-MPS 360 mg daily. Flexible sigmoidoscopy 2 months later revealed normal mucosa without any histologic changes suggesting recurrent colitis. Repeat FCP and CRP were 27 mcg/g and 12.4 mg/L respectively.
Discussion: MMF induced hemorrhagic colitis can be observed in post-transplant patients on MMF. Risk for MMF induced colitis is difficult to predict yet most patients respond rapidly to discontinuation of MMF. Still, this may lead to acute graft rejection as seen in our case. Our case suggests that EC-MPS may be a safe alternative in instances of MMF-induced colitis given the reduced association with GI related toxicities.

S2070

Mucosal Schwann Cell Hamartoma: A Benign but Obscure Finding

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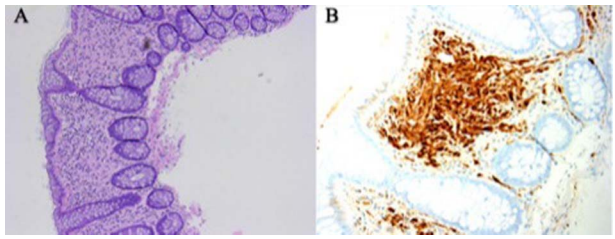
Introduction: Mucosal Schwann Cell Hamartoma (MSCH) is a rare entity with few case reports present in literature. While harboring no malignant potential, it is more commonly found in the elderly. We report a case of a 69-year-old male patient found to have a MSCH.
Case Description/Methods: A 69-year-old African American male with no history of gastrointestinal disease and no family history of neuronal lesion presented for a follow up colonoscopy. Previous colonoscopy in 2017 showed 6 subcentimeter sessile polyps, one of which was a 5 mm polyp in the sigmoid colon, all removed by cold snare polypectomies. Histology of this polyp was consistent with MSCH (**Figure** 1), with the other polyps showing tubular adenomas (TA). Immunohistochemical (IHC) stains were positive for S100, and negative for CD68 and SMA further supporting the diagnosis. The patient was otherwise asymptomatic. The follow up colonoscopy 5 years later revealed 6 subcentimeter sessile polyps with one being a 5 mm polyp in the sigmoid colon. Histology of this polyp revealed MSCH and the other polyps revealed TA.
Discussion: MSCH of the sigmoid colon is a rare condition that is usually an incidental finding on colonoscopy. MSCH is a benign mesenchymal nerve sheath tumor originating from Schwann cells, arising in the lamina propria of the colon. They are most commonly seen in the sigmoid colon and are detected as small polyps anywhere between 1 and 8 mm. There is no association with any inherited disorder. Most patients present asymptomatically, however, when symptomatic, patients can present with diarrhea, abdominal pain, bleeding, or constipation. Because of its rarity, the significance of the finding is not clear. Currently, there are no guidelines for surveillance colonoscopy for MSCH. It is important to accurately identify these hamartomas, as they can mimic malignant lesions or lesions with malignant potential such as colonic leiomyoma, gastrointestinal stromal tumor (GIST), GI schwannomas and neurofibromas. Diagnosis is dependent on histological features and IHC pattern. On histology, hamartomas show proliferation of spindle cells in the lamina propria separating the crypt architecture. Strong positivity for S100, and negative CD68 and SMA is suggestive of neural origin and prove Schwann cell phenotype. There have been no reports of malignant transformation in literature. Awareness of this entity could prevent additional endoscopies for patients and decrease healthcare costs from unnecessary surveillance and treatments.



[2070] **Figure 1.** A, H&E stain of mucosal proliferation in the lamina propria. B, S100+ staining (brown).

S2071

Natural Killer Polyp

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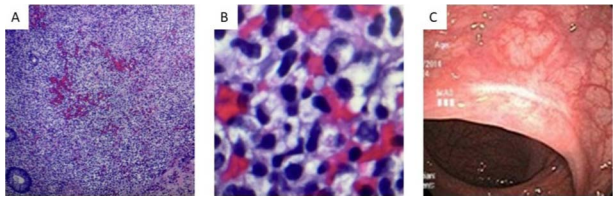
Introduction: Natural killer (NK) cells are cytotoxic lymphocytes that can induce an innate immune response against tumors and virally-infected cells. NK cell enteropathy (NKCE) is clinically indolent although histologically it resembles NK/T-cell lymphomas. Therefore, accurate diagnosis is instrumental to avoid overtreatment.
Case Description/Methods: A 45-year-old female presented with 2 episodes of nocturnal left lower quadrant "labor-like" pain lasting for 1-2 hours each, which were not alleviated by ibuprofen or acetaminophen. She described her subsequent bowel movements as bloody, skinny stool. Her pain was associated with abdominal tenderness for 3 days. She denied a change in weight or appetite but did endorse decreased energy over the last several months. Her family history is limited since she was adopted. Physical examination and lab tests were unremarkable. Colonoscopy showed a flat, 1-cm polyp with 3 erosions in the rectum. Excisional biopsy revealed polypoid fragments of rectal mucosa with atypical lymphoid infiltrate with NK cell phenotype involving predominantly the mucosa and multifocally through the muscularis mucosa (**Figure** 1A and 1B). Immunohistochemical staining was positive for CD3, CD7, CD56, and BCL2. Ki-67 highlighted approximately 90% of the lesional cells. These results were consistent with NKCE. The CT was unremarkable. It was decided to manage her conservatively. Repeat colonoscopy 6-months later revealed a post-polypectomy scar in the rectum (**Figure** 1C). Scar biopsy was negative for abnormal cells. She followed up with oncology and has been in remission for more than 5 years. Her most recent colonoscopy still showed an unchanged rectal scar.
Discussion: The lack of systemic symptoms, the isolated colon location, and its EBV-negative staining point toward a diagnosis of NKCE rather than lymphoma. NKCE typically presents with vague abdominal symptoms and bleeding. Since NKCE mimics NK/T-cell lymphoma, it is important to accurately diagnose the disease to prevent erroneous overly aggressive treatment. Since this disease and the exact stimulus are not well established, further research needs to explore the appropriate standard of care for patients with NKCE.



[2071] **Figure 1.** A and B, histologic findings consistent with a diagnosis of natural killer cell enteropathy. C, post-polypectomy scar.

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S2072

Microscopic Colitis Induced by KRAS Targeted Therapy, Sotorasib

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Introduction: Microscopic colitis is a chronic inflammatory condition in the colon where the patients usually present with chronic non-bloody, watery diarrhea. Colonoscopy usually shows normal mucosa and the diagnosis is established by colon biopsies that show the characteristic submucosal histologic changes. Microscopic colitis has been associated with smoking and different medications such as NSAIDs, PPIs, and SSRIs. We present a case of microscopic colitis that was found to be associated with the KRAS inhibitor, Sotorasib.
Case Description/Methods: A 52-year-old non-smoker male with a history of stage IV poorly differentiated lung adenocarcinoma status post radiation and chemotherapy 6 months ago, clostridium difficile diarrhea 6 months ago, and pulmonary embolism on Rivaroxaban. The patient was then started on KRAS targeted therapy with Sotorasrib 960 mg daily given the progression of his carcinoma. One month later, he developed watery diarrhea. PCR stool, including clostridium difficile, was unremarkable. Sotorasib dose was decreased to 480 mg daily and then to 240 mg daily, however; he continued to have severe diarrhea and then was admitted to the hospital. He stated that he had been having 6-8 episodes of loose watery non-bloody stools associated with poor appetite and decreased oral intake. He denied any nausea or vomiting. The patient was started on IV fluids and Imodium while Sotorasib was held. CT abdomen with oral and IV contrast showed stable metastatic right iliopsoas mass and mild colonic wall thickening. Colonoscopy was done and showed grossly normal colonic and rectal mucosa. The cecum, ascending, and sigmoid colon biopsies showed inflammatory granulation tissues consistent with microscopic colitis. Diarrhea significantly improved after discontinuation of Sotorasib. The patient was discharged once his diarrhea resolved which did not recur afterward.
Discussion: Sotorasib is an antineoplastic, KRAS inhibitor, which is typically used in advanced non-small-cell lung cancer. Diarrhea has been established as a common side effect (47%) of this medication that can limit its use in the indicated cases. This is the first case report in the literature, up to our knowledge, that shows an association between microscopic colitis and Sotorasib. Understanding the underlying pathophysiology of diarrhea as a limiting side effect of Sotorasib may help the patients to tolerate such medication.

S2073

Non-Hodgkin's Lymphoma With Extra-Nodal Involvement of Colon: A Rare Presentation

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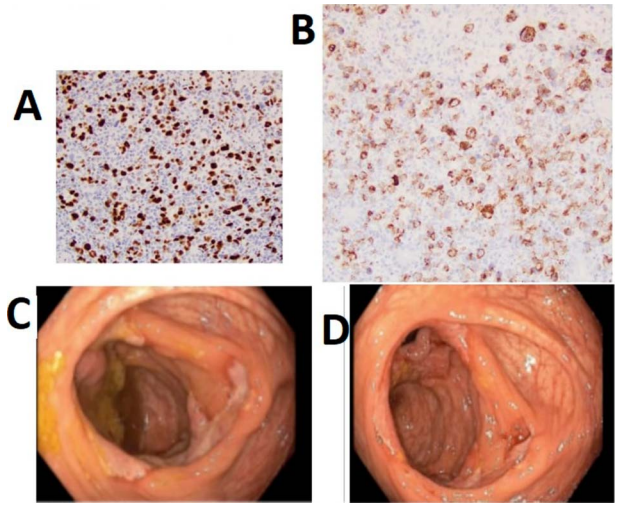
Introduction: Non-Hodgkin's lymphoma is the most common hematologic malignancy with many subtypes of disease, with diffuse large B-cell lymphoma (DLBCL) being the most common. Extra-nodular presentation in the gastrointestinal tract is typical in many cases, however the involvement of the colon is rare. We are presenting a case of a patient with lymphoma of the cecum who initially presented with an enlarging neck mass.

Case Description/Methods: A 56-year-old male, with a past medical history of hypothyroidism, presented to the ER with a neck mass and associated symptoms of dysphagia, weight loss and night sweats. A CT scan of the neck showed well defined lesions in the thyroid gland, moderate prominence of left tonsil, cervical and mediastinal lymphadenopathy. He underwent fine needle aspiration of the thyroid mass and a biopsy of the left tonsillar mass. Cytology showed lymphocytes positive for CD20 (B-cell marker) (**Figure** 1). The patient was diagnosed with aggressive DLBCL. Staging was completed with a whole-body PET scan. This scan detected focal wall thickening at the base of the cecum and within the proximal portion of the ascending colon demonstrating hypermetabolic activity. A colonoscopy was performed and a solitary 15 mm ulcer was found in the cecum (**Figure** 1). Ulceration was quite extensive with distortion of the ileocecal wall. The obtained biopsy exhibited ulcerated colonic mucosa showing infiltrative large B-cells. The final diagnosis given was DLBCL of the cecum. He was started on the chemotherapy combination of rituximab, cyclophosphamide, doxorubicin hydrochloride, vincristine, and prednisolone (R-CHOP).
Discussion: The pathogenesis of DLBCL is complex and typical clinical presentation will display a rapidly enlarging symptomatic mass, which is usually a growing node in the neck or abdomen with common systemic "B" symptoms. Colon lymphoma symptoms include abdominal pain, bleeding, diarrhea, and rarely bowel obstruction. In absence of extra-nodal symptoms, it is important to recognize other sites for lymphoma involvement. Poor prognostic factors for colon lymphoma include presence of "B" symptoms, disease stage > I, and age > 58 years. Most treatment recommendations are based on therapies for gastric lymphoma and have been extrapolated to the treatment of intestinal lymphomas. Most patients are treated with surgery (for large tumors causing obstruction) and adjuvant chemotherapy. The best treatment consists of the chemotherapy combination of rituximab with 6 cycles of 3-weekly CHOP.



[2073] **Figure 1.** A, C-MYC stain (20×): Large B cells positive. B, EBV-LMP1 stain (20×): Large B cells positive. Final Diagnosis is EBV+ diffuse large B cell lymphoma, germinal center phenotype (DCBCL, GCB). C-D, Endoscopic image displaying a solitary 15 mm ulcer of the cecum. Extensive ulceration with distortion of ileocecal valve is noted.

S2074

Milk Alkali Syndrome Complicated by Calcium Impaction Causing Bowel Perforation

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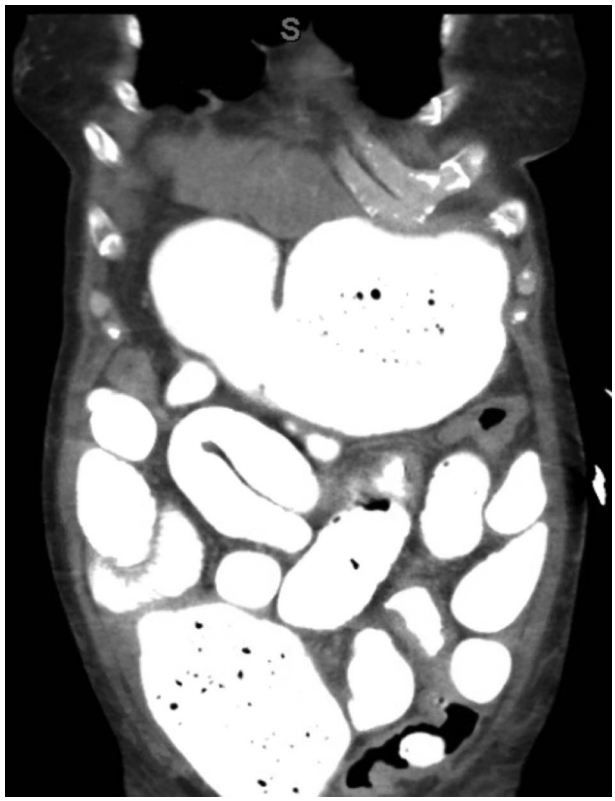
Introduction: The milk-alkali syndrome consists of hypercalcemia, metabolic alkalosis, and acute kidney injury associated with the ingestion of large amounts of calcium and absorbable alkali. There has been a resurgence of this condition due to calcium therapy for prevention and treatment of osteoporosis, easy access to over-the-counter calcium carbonate preparations, and use of calcium carbonate to minimize secondary hyperparathyroidism in patients with chronic kidney disease. We report a rare case of severe milk-alkali syndrome resulting in hemodynamic instability and multiple metabolic derangements with severe intestinal obstruction in the setting of fecal impaction.
Case Description/Methods: A 63-year-old female with an unspecified psychiatric disorder was brought to the emergency room with altered mental status and with a white powder around her mouth and neck. She was hypothermic and hypotensive. On exam she was somnolent with diffuse abdominal tenderness and distension. Laboratory findings revealed hyponatremia, hypokalemia, hypercalcemia of 12.6 mg/dL, metabolic alkalosis, acute kidney injury, undetectable intact parathyroid hormone, normophosphatemia, and hypermagnesemia. A urine drug screen was negative. Non-contrast computed tomography (CT) of the abdomen and pelvis showed dense radio-opaque material filling the stomach, small and large bowel as well as constipation/fecal impaction and gastroparesis (**Figure** 1). Gastroenterology evaluated the patient for fecal disimpaction with minimal clinical improvement. Repeat CT showed extravasation of white contrast material consistent with small bowel perforation. She underwent emergent exploratory laparotomy with findings of creamy inspissated white material throughout the stomach and small intestine, causing large stercoral impaction of the cecum with gangrenous changes.
Discussion: Calcium powder causing gastrointestinal obstruction and bowel perforation is exceedingly rare. Few case reports exist demonstrating obstruction and/or perforation secondary to calcium powder, and specifically occurred during administration of calcium polystyrene sulfonate during treatment of hyperkalemia. Patients at highest risk for these complications appear to be those of older age and with reasons for preexisting reduced gastrointestinal motility. It is unknown what exact contents our patient ingested, but it is presumed it was calcium powder in extreme excess that led to her presentation.



[2074] **Figure 1.** Non-contrast computed tomography of the abdomen and pelvis coronal view.

S2075

Mixed Adeno-Neuroendocrine Carcinoma (MANEC) of Colon: Rare Differential Diagnosis for Iron Deficiency Anemia

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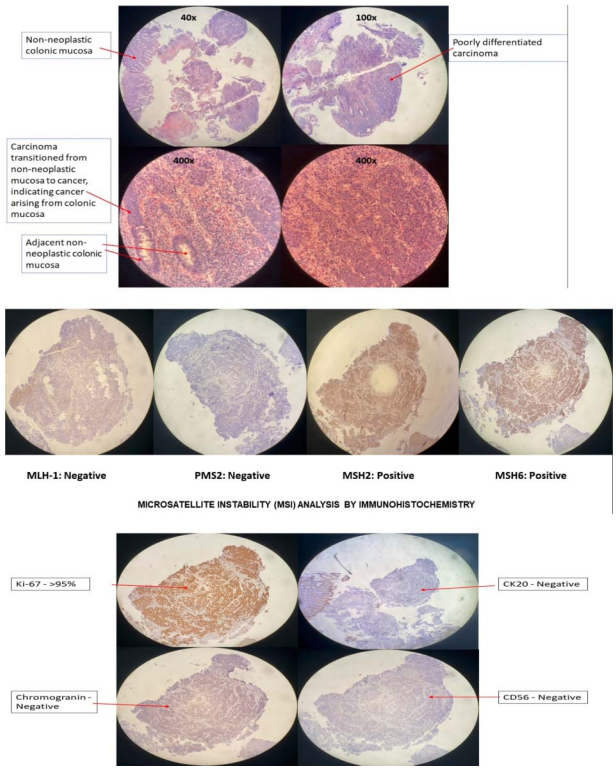
Introduction: Colonic Mixed adenoneuroendocrine carcinoma (MANEC) is a rare but highly aggressive tumor. In English Literature only 10 cases or less have been reported of this neoplasm, with the prognosis still unfavorable. Mixed adenoneuroendocrine carcinomas, by definition, are comprised of at least 30% of both a neuroendocrine and an adenocarcinomatous component. Cases are typically diagnosed at advanced stages, and the age of presentation is younger than the average age of colorectal adenocarcinoma (~60 years old). Metastasis can occur anywhere but usually seen in the liver, regional lymph nodes and rarely peritoneum. The tumor neuroendocrine markers and immunophenotype are essential for the diagnosis, for example chromogranin, synaptophysin, CDX-2, and CD56.
Case Description/Methods: A 53-year-old women with a history of abdominal pain was diagnosed with NET via histopathology of the cecum. The patient was referred to us by her hematologist which he ordered CT/pelvis due to her new onset of iron deficiency anemia and CT scan showed irregular bowel wall thickening of proximal ascending colon with infiltration and nodularity of surrounding fat suspicious of colon neoplasm. The patient has diabetes mellitus and hypertension other than that she had no significant history of past illness. A colonoscopy and biopsy were performed that showed poorly differentiated carcinoma with ulceration in large bowel mucosa, morphologically, high grade poorly differentiated malignant neoplasm was noted with ulceration. Histopathology and Immunohistochemical studies show the tumor cells are positive for AE1/3, CK7, synptophysin, CDX-2, while negative for CK20, chromogranin, CD56. Ki-67 shows a high labeling index (−95%). The negative stain of tumor cells for MLH-1 and PMS2 can be associated with microsatellite instability related germ line mutation. The differential diagnosis includes poorly differentiated adenocarcinoma, mixed adenoneuroendocrine carcinoma and large cell endocrine carcinoma. A definitive classification depends on the total resection specimen (**Figure** 1).
Discussion: Mixed adenoneuroendocrine carcinoma of the colon is a neoplasm consisting of 2 components coexisting simultaneously within a tumor. It is a very rare carcinoma that presents at a younger age than colorectal adenocarcinoma. Unfortunately, it is diagnosed usually at late stages when metastasis has occurred. If detected at early stages curative surgery can be the treatment. The prognosis Is poor due to late diagnosis and dual nature of the tumor.



[2075] **Figure 1.** Histology and Immunohistochemical studies.

S2076

Not an Ordinary Intussusception: A Sigmoid Diverticula With an Extra-Colonic Mass

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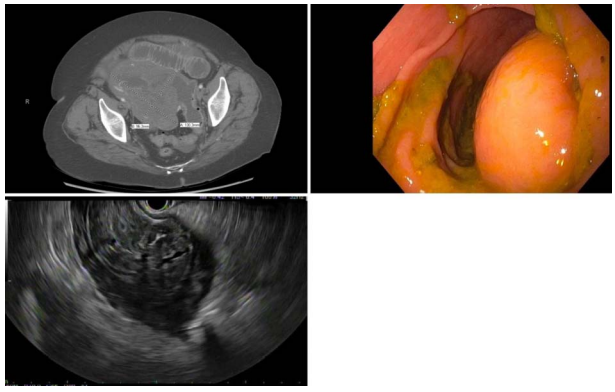
Introduction: Intussusception is defined as telescoping of a segment of the gastrointestinal tract into an adjacent lumen frequently found in childhood and are rarely found in adults. Etiologies of intussusception include benign or malignant tumors and idiopathic causes. Diverticula are rare findings for intussusception. This is a case of a patient found to have an intussusception due to a sigmoid diverticula and found to have a pelvic mass isolated outside of the diverticula.
Case Description/Methods: An 80-year-old White female presented for worsening abdominal pain, nausea, and vomiting. History otherwise was unremarkable. CT of the abdomen and pelvis demonstrated a small bowel obstruction with a transition point in the left lower abdomen and a large 12.7x10.4 cm necrotic right pelvic mass involving the sigmoid colon (**Figure** 1A). The patient underwent a flexible sigmoidoscopy and endoscopic ultrasound. Endoscopic findings demonstrated an intusscepting large diverticulum at 40 cm and a peri-sigmoid heterogenous vascular mass on endosonography (**Figure** 1B and 1C). The patient underwent surgical resection of the mass, which upon resection demonstrated a mass arising from the sigmoid diverticulum isolated off the true colonic wall. Pathology demonstrated a 10.5 cm smooth muscle tumor concerning for a leiomyoma of deep soft tissue which did not involve the muscularis mucosae; staining was positive for muscle markers, no significant mitotic activity on Ki-67 mitotic proliferation markers, CD117, DOG1 were negative. Post operatively the patient did well.
Discussion: Adult Intussusception are commonly due to colonic masses and are rarely associated with diverticula. This case highlights a patient who was found to have a sigmoid diverticulum as the etiology for intussusception and found to have an associated colonic mass as an extension from the diverticula isolated from the colonic wall. This diverticulum was likely a result of the chronic mass creating tethering of the bowel to the area. Masses arising from diverticula are rare and the majority of mases are found upon evaluation of other symptoms (pain and bleeding). In this patient, pathology demonstrated a leiomyoma which are rare benign tumors that are generally asymptomatic and found incidentally. During endoscopy, outside of a diverticula there was no obvious mass until endoscopic ultrasound was done. Therefore, this case highlights how critical it is for endoscopists to have a low threshold for further work up despite an unrevealing endoscopy.



[2076] **Figure 1.** A (Top Left), CT Scan of abdomen and pelvis with large necrotic mass. B (Top Right), Endoscopic view of diverticula. C (Bottom Left), Endoscopic ultrasound of necrotic mass.

S2077

Metastatic Malignant Pleural Mesothelioma Presenting as Sigmoid Polyps

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Introduction: Malignant mesothelioma is a rare and aggressive neoplasm that arises from mesothelial cells of serosal cavities such as the pleura and peritoneum. Diagnosis is often delayed due to variable and non-specific symptoms and treatment plans are not well-defined, resulting in poor prognosis. Patients typically have extensive tumor involvement by the time they seek care and median survival is approximately 12 months from diagnosis. We present a rare case of a 60-year-old male with metastatic mesothelioma presenting as sigmoid polyps.
Case Description/Methods: A 60-year-old non-smoking male with history of malignant pleural mesothelioma and associated liver and peritoneal carcinomatosis presented with one-month of abdominal pain. He was previously diagnosed with mesothelioma by liver biopsy and underwent chemotherapy and radiation. He has a family history of lung cancer in his father. Blood profile was significant for normocytic anemia; otherwise, findings including urine and stool analyses were within normal limits. Patient had generalized abdominal tenderness on exam. Colonoscopy revealed mucosal edema and narrowing in the sigmoid colon in addition to 2 sigmoid polyps that were biopsied. Pathology results showed the tissue to be positive for AE1/AE3, CK7, Calretinin, and WT-1; and negative for CK20, CDX2, TTF-1, and Napsin A, confirming metastatic mesothelioma. Colonoscopy performed 3 years prior was unremarkable. Patient died 8 months after presentation from complications of perforated viscous.
Discussion: Malignant mesothelioma is a rare and insidious malignancy that is associated with poor prognosis due to advanced disease progression at the time of diagnosis. When involving the abdomen, metastases to abdominal cavity is more common than to the GI tract. We describe a rare case of metastatic mesothelioma presenting as sigmoid polyps and demonstrate the importance of clinical history and immunohistochemistry for diagnosis. We conclude that metastatic mesothelioma should be considered in the differential diagnosis of tumors of the colon.

S2078

Multicentric, Synchronous Colon Cancer in the Rectum, Sigmoid and Cecum in an Elderly Female

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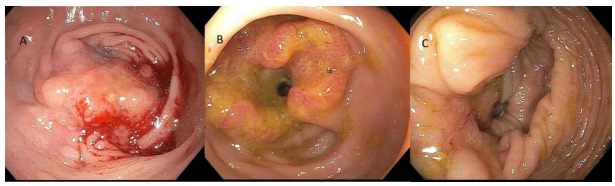
Introduction: Multicentric tumors are more common in genetically-linked cancers. In most instances, tumor occurrence in a different location is due to recurrence of the malignancy. Our case illustrates a rare endoscopic finding of 3 distinct and synchronous adenocarcinomas of the rectum, sigmoid colon, and cecum in an otherwise healthy elderly female at an average risk for colorectal cancer.
Case Description/Methods: An 81-year-old female with no medical history presented to the hospital with constipation and diffuse intermittent abdominal pain for 4 months. She had been self-medicating at home with over-the-counter laxatives but recently reported that she was not experiencing relief. She denied any prior endoscopy or family history of colorectal cancer. On admission, her vital signs were normal and her physical exam was significant for diffuse abdominal tenderness to palpation. Digital rectal examination revealed a non-tender, hard mass in the left lateral wall of the rectum. Her complete blood count and comprehensive metabolic panels were normal. Iron studies were also unremarkable. A computed tomography (CT) scan of the abdomen and pelvis showed thickening in the sigmoid colon and the rectum with scattered subcentimeter lymph nodes. On colonoscopy, she was found to have 3 partially-obstructing, malignant-appearing lesions located in the rectum, proximal sigmoid, and cecum. Biopsies of all 3 sites revealed adenocarcinoma. Immunohistochemistry for DNA mismatch repair proteins (MMR) showed intact MLH1, MSH2, MSH6, PMS2 genes. She underwent a laparoscopic total colectomy with end ileostomy, with pathological staging revealing pT3 N0 for the sigmoid tumor and pT4a N2b for the cecal tumor. She was planned for neoadjuvant chemoradiation therapy in anticipation for future robotic proctectomy for treatment of the rectal tumor (**Figure** 1).
Discussion: Synchronous colorectal cancers pose a distinct challenge in terms of management and treatment. The extent of surgical resection and the use of chemoradiation depends on the location, number of lesions, and lymph node involvement. Our patient was an interesting case as she presented later in life and her only symptom was constipation. She was an average risk patient, had otherwise normal labs, and HNPCC/lynch syndrome-related cancers were excluded on the basis of normal immunohistochemistry testing.



[2078] **Figure 1.** Partially-obstructing malignant lesions in the (A) rectum, (B) proximal sigmoid, and (C) cecum.

S2079

Not Just Another Case of Diarrhea: A Case of Vibrio Cholera During COVID-19 Era

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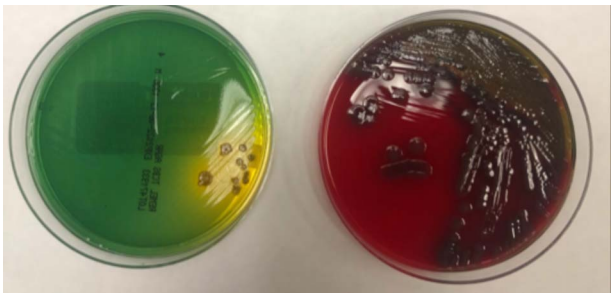
Introduction: *Vibrio cholerae* is a gram negative, comma-shaped, toxin producing bacteria, which causes large volumes of watery stool leading to dehydration, hypovolemic shock, and metabolic acidosis. Stool culture with PCR is the gold standard for diagnosis. It is pertinent that if cholera is a differential, treatment with isotonic oral rehydration and antibiotics are not delayed. When traveling to endemic or epidemic areas vaccination should be considered. Here we discuss a case of *Vibrio cholera* infection diagnosed in Farmington, Connecticut in a patient with recent travel back from Pakistan in mid-April 2022.
Case Description/Methods: 61-year-old female with no relevant past medical history presented to the hospital complaining of fatigue and 3 days of profuse, watery, dark diarrhea occurring 8 times daily, starting the day she returned home to Connecticut after traveling in Pakistan. She drank primarily store-bought bottled water but reported some cooking with tap water. She was lethargic and hypovolemic with a diffusely tender abdomen and hyperactive bowel sounds. Lab work was pertinent for leukocytosis, AKI, hypokalemia, and mild metabolic acidosis. Hemoccult stool, *Clostridium difficile* toxins A&B, *Salmonella, Shigella*, and fecal leukocyte count were negative. Her course was complicated by altered mental status, worsening AKI, hypokalemia, and metabolic acidosis requiring a bicarbonate drip. Eight days into her admission stool study resulted positive for cholera (**Figure** 1). Her metabolic derangements were aggressively treated, and her symptoms improved.
Discussion: During the COVID-19 pandemic and ongoing travel restrictions, cholera is not typically the first infection thought of for patients with diarrhea and fatigue. Still, we are seeing cases rise in locations where cholera case-fatality rates were previously dropping in a pre-pandemic COVID-era, thought to be from reduced health promotion activities. In 2019, the Center for Disease Control and Prevention reported a total of 14 cases of *Vibrio cholera* within the United States, most from overseas travel. Thus, it is important to keep a broad differential diagnosis regardless of location even during a time of travel restrictions.



[2079] **Figure 1.** Vibrio culture on thiosulfate-citrate-bile salts-sucrose (TCBS) agar (left) and on blood agar (right).

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S2080

Mucosal Schwann Cell Hamartoma of the Sigmoid Colon in a Transgender Female to Male on Testosterone Therapy: A Case Report

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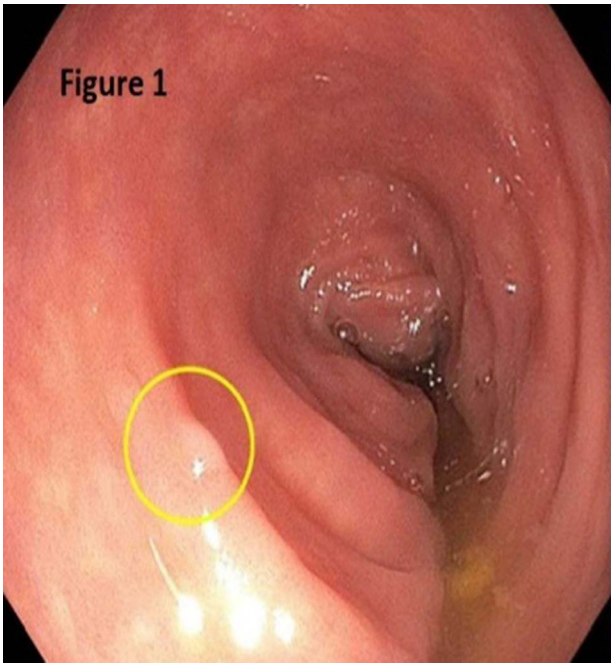
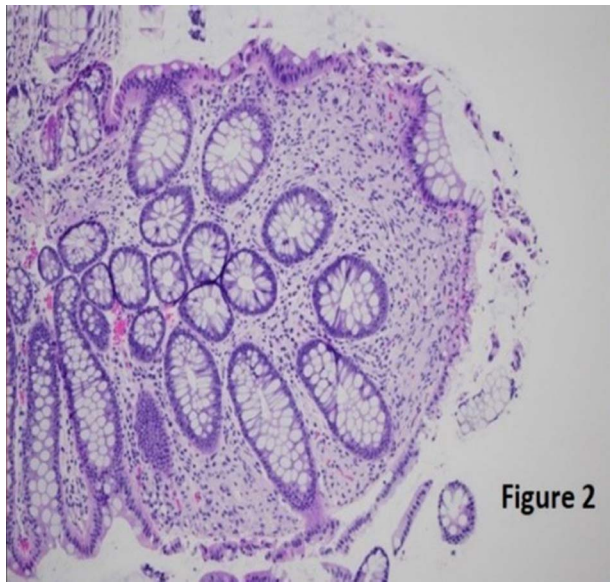
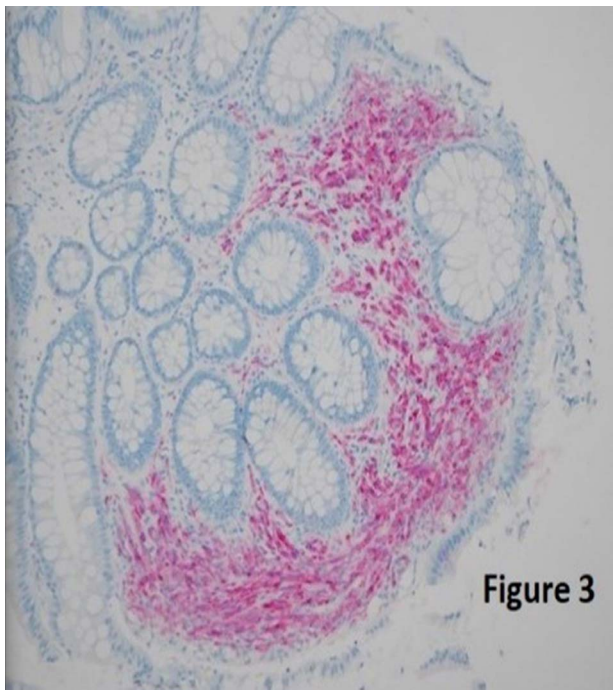
Introduction: Mucosal Schwann cell hamartomas of the gastrointestinal tract are rare benign mesenchymal neoplasms, of which the exact incidence within the population is unknown. First described as a new entity in 2009 by Gibson and Hornick[1] in a retrospective case study examining pathology from 26 patients, it is suspected that the increase in incidence of colonic mucosal Schwann cell hamartomas is due to the increase of colorectal cancer screening. As of 2020, there have been 41 documented cases of Schwann cell hamartomas.[2]
Case Description/Methods: A 63-year-old transgender female to male on testosterone therapy for 10 years and history of adenomatous colon polyps 3 years prior presented for outpatient surveillance colonoscopy. The patient had no personal or family history of neurofibromatosis type 1 (NF1), Cowden syndrome, or multiple endocrine neoplasia (MEN) type 2b. Colonoscopy was notable for a 1 mm sessile polyp in the sigmoid colon (**Figure** 1) and 4 mm sessile ascending colon polyp. Review of the pathology demonstrated a tubular adenoma without dysplasia in the ascending colon, and in the sigmoid colon S-100 positive spindle cells with elongated nuclei and dense eosinophilic cytoplasm, consistent with a mucosal Schwann cell hamartoma (Figures 2 and 3).
Discussion: Our patient presented for routine surveillance colonoscopy and was found to have a rare benign mesenchymal neoplasm of the sigmoid colon, a Schwann cell hamartoma. Mucosal Schwann cell hamartomas are typically small, 1-8 mm, primarily located in the left colon, have a female predominance and an average age at presentation of 62.[3] They are not associated with malignancy or inherited syndromes.[1,4] The histological differential diagnosis includes schwannoma, neurofibroma, mucosal neuroma, ganglioneuroma, ganglioneurmatosis, perineurioma and GIST, making accurate diagnosis key to avoid unnecessary treatments.[4] Interestingly, our patient found to have a mucosal Schwann cell hamartoma of the sigmoid colon is a transgender female to male on testosterone therapy, which to our knowledge has not previously been reported. Recent studies in animal models have suggested testosterone may promote the growth of colorectal adenomas.[5] The role of sex hormones in development of these neoplasms has yet to be explored.



[2080] **Figure 1.** Endoscopic finding of a 1 mm sigmoid colon polyp.



[2080] **Figure 2.** Histologic features show spindle cell proliferation, elongated nuclei, and eosinophilic cytoplasm under hematoxylin and eosin-stained sigmoid colonic mucosa. This is consistent with a mucosal Schwann cell hamartoma.



[2080] **Figure 3.** Immunochemistry for S-100 spindle cells within the sigmoid colon. This stain further solidified the diagnosis of Schwann cell hamartoma.

S2081

Rare Colonic Polyps: A Case of Langerhans Histiocytosis

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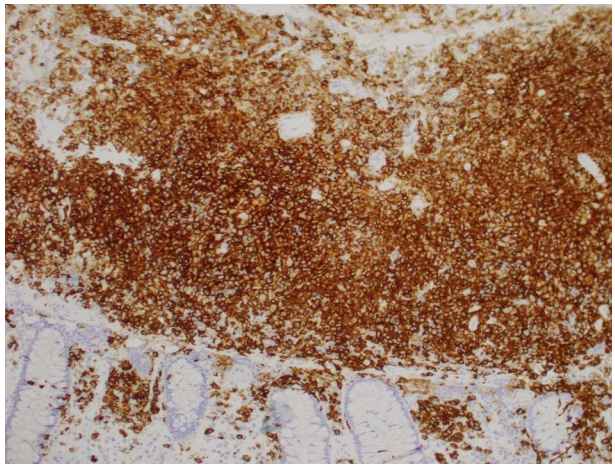
Introduction: Langerhans Cell Histiocytosis (LCH) is a rare inflammatory myeloid disorder mostly seen in children before the age of 5. The clinical presentation is heterogeneous with potential for wide-ranging organ involvement, primarily in the bone, skin, and lungs. Gastrointestinal tract involvement is very rare in LCH, and in symptomatic patients, etiology could be confused with infectious, allergic, and autoimmune bowel diseases. In children, LCH GI tract involvement has been associated with decreased survival due to multisystem involvement and digestive complications including diarrhea, vomiting, malabsorption, and failure to thrive. Review of literature shows less than twenty adults with incidences of GI tract involvement of LCH and only 4 cases of adults with LCH colon polyps.
Case Description/Methods: A 66-year-old man presented for screening colonoscopy. He reported generally good health without any GI or systemic symptoms or medical history. Family history was significant for leukemia in his brother. He currently smokes cigarettes and has a 2.5 pack-year history. On colonoscopy, 6 benign-appearing polyps were removed using cold snare polypectomy: 3 from the ascending colon (largest 0.5 cm in size), one from the splenic flexure of the transverse colon (0.4 cm in size), and 2 from the rectum (largest 0.4 cm in size). Quality of bowel preparation was excellent and the procedure was without complication. Rectal polyps were hyperplastic. Submucosal sections of the ascending and transverse colon polyps stained positive for CD1a, CD68, and S-100, consistent with Langerhans-type cells. The

LCH diagnosis was further supported by irregular nuclei within focal nuclear grooves and an eosinophilic cytoplasm. Genomic testing of the colon sample revealed BRAFV600E mutation, the most recognized targetable mutation in LCH. He underwent further testing with PET scan and bone marrow biopsy, both of which were negative for LCH. Surveillance colonoscopy was recommended in 7 years (**Figure** 1).
Discussion: With his lack of systemic disease and asymptomatic presentation, watchful waiting and Oncology follow-up was recommended. Given the unusual diagnosis of LCH via a colon polyp, it is possible for lesions to be clinically unsuspected and histologically overlooked. With increasing rates of screening colonoscopy, more polyps demonstrating LCH on histopathology may be identified. Reports of LCH in the GI tract and colon polyps are infrequent and characterization of outcomes will rely on further cases in this population.



[2081] **Figure 1.** Positive immunostaining for CD1a, classically expressed by Langerhans cells.

S2082

The Great Imitator Strikes Again! Colonic Ischemia Manifesting as a Solitary Cecal Ulcer

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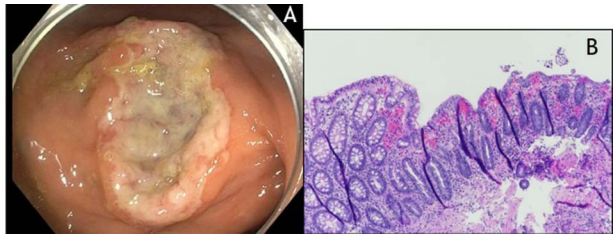
Introduction: Solitary cecal ulcer is a relatively rare condition, with non-specific signs and symptoms. While ischemia isthe most common cause of colonic ulceration, carcinoma is the most common cause of ulceration in the cecum. We present a unique case of a solitary cecal ulcer secondary to ischemia to highlight the notoriously variable presentation of colonic ischemia.
Case Description/Methods: An 85-year-old male with a history of dementia, stroke, and cardiovascular risk factors presented to the emergency department for altered mental status, where he subsequently had large volume hematochezia. The patient was tachycardic, but normotensive and afebrile. His physical exam was notable for a normal abdominal examination, and being alert but oriented only to self and location. Laboratory findings were notable for a hemoglobin of 8.4 g/dL on presentation, which later dropped to a nadir of 4.6 g/dL. Computed tomography demonstrated colonic diverticulosis without acute processes. His last colonoscopy was 6 years prior with 8 adenomas. Patient was admitted to the hospital and resuscitated. After discussing risks and benefits, patient's medical power of attorney requested we proceed with colonoscopy. Colonoscopy showed a 3cm by 1.5cm cratered ulcer in the cecum (**Figure** 1A). Targeted cold forceps biopsies were obtained from the margins of the cecal ulcer. Patient's clinical course was complicated by abdominal pain and fever that evening, with an abdominal x-ray suggesting pneumoperitoneum concerning for a perforation. Given patient's co-morbidities, he was managed conservatively with NPO and antibiotics with resolution of symptoms and abnormal vital signs; he was ultimately discharged home with family. Pathology later revealed an ischemic colitis pattern of injury, including the transition from normal mucosa to ischemic tissue characterized by loss of mucin and atrophic "withered" crypts, hyalinization, and edema of the lamina propria (**Figure** 1B). Given patient's co-morbidities, no further follow up was pursued.
Discussion: Colonic ischemia is a common disorder that can affect any part of the colon, with highly variable clinicaland endoscopic manifestations. Less commonly encountered are isolated cecal ulcers, which should prompt the evaluation for malignancy, infections, inflammatory bowel disease, or NSAID use. This case emphasizes the elusive clinical presentation of colonic ischemia and the importance of adequate tissue sampling to rule out other etiologies when encountering isolated cecal ulcers.



[2082] **Figure 1.** A is a 3 cm by 1.5 cm cratered ulcer in the cecum. B is the histology from biopsies of the edge of the ulcer showing an ischemic colitis pattern of injury, including the transition from normal mucosa to ischemic tissue characterized by loss of mucin and atrophic "withered" crypts, hyalinization, and edema of the lamina propria.

S2083

Mucosa-Associated Lymphoid Tissue (MALT) Lymphoma of the Colon

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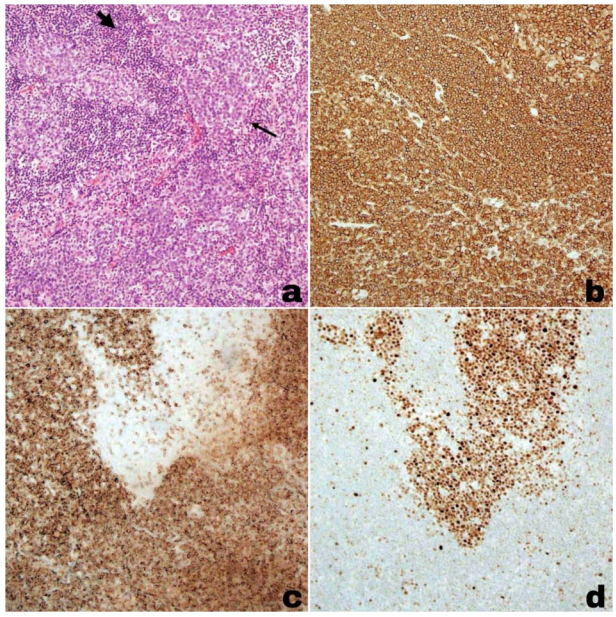
Introduction: Non-Hodgkin lymphoma (NHL) is a notable hematologic malignancy that may emerge as nodal or extra-nodal. Mucosa-Associated Lymphoid Tissue (MALT) Lymphomas account for 5-10% of NHLs, of which most are in the stomach and intestines due to H. Pylori's significant role in their development. Colonic involvement is poorly understood and accounts for only 2.5% of MALT lymphomas, making it an extremely rare occurrence. Most MALT lymphomas present as a single polypoid lesion or submucosal tumor. We bring to light a case of a colonic MALT lymphoma that was found during a screening colonoscopy.
Case Description/Methods: A 59-year-old male patient with a personal history of colon polyps presented for a screening colonoscopy in 2018. His last procedure in 2013 concluded with the resection of 3 tubular adenomatous polyps necessitating repeat colonoscopy in 5 years. Upon presentation, patient denied any fever, chills, night sweats, or unintentional weight loss. Colonoscopy was done and revealed a 5mm sessile polyp in the ascending colon that was removed with hot snare as well as 2 4mm sessile polyps in the ascending and descending colon that were removed by cold snare. Biopsy report of the 5mm polyp revealed extra-nodal marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT) of low-grade histology. Tissue sample was CD20+, BCL2+, and stained about 15-20% with Ki67 immunostaining. *H. pylori* stool antigen testing was negative. Patient was referred to the oncology team for further management. PET scan did not show any evidence of widespread disease. Bone marrow core

biopsy and aspirate showed normocellular bone marrow with no evidence of lymphoma involvement. No further intervention was done. A colonoscopy was planned after 3 years for tumor surveillance. Procedure was done in 2022 and showed no polyps, highlighting complete resection of the previous 5mm MALT lymphoma polyp in the colon (**Figure** 1).

Discussion: Colonic MALT lymphoma is a rare subtype of extra-nodal marginal zone lymphoma (EMZL) and a proper treatment guideline is yet to be established. Surgical resection, chemotherapy and/or radiotherapy have been previously used successfully in establishing remission. Curative endoscopic resection is an option for localized EMZL and patients can be followed with close observation without any further aggressive therapies.



[2083] **Figure 1.** A, H&E ×100 (Thick arrows: small lymphoid cells; thin arrows: residual germinal center) (B) CD20 ×100 (stains both small lymphoid cells and the germinal center) (C) BCL2 ×100 (stains both T and B cells) (D) BCL6 ×100 (stains B cells in the residual "moth-eaten" germinal center).

S2084

An Unusual Cause of Rectal Bleeding: Colonic Angiolipoma

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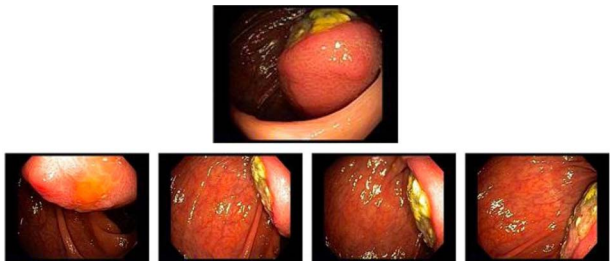
Introduction: Angiolipomas are rare, benign, subcutaneous tumors composed of adipose tissue and vascular components. Angiolipomas are extremely rare in the colon, accounting for less than 1% of all colonic benign lesions. While these tumors are typically painful, they may also present with rectal bleeding or positive fecal occult blood test in an otherwise asymptomatic patient. Therefore, it is important to recognize the clinical, radiological, and endoscopic findings associated with these masses.

Case Description/Methods: A 49-year-old male with hypertension and hyperlipidemia presented for evaluation of 3 days of self-limited rectal bleeding. The patient had no prior colonoscopies and denied associated symptoms of abdominal pain, diarrhea, or constipation. On physical examination, the abdomen was soft, non-tender, and non-distended with no palpable masses. Colonoscopy was remarkable for a malignant-appearing, large, ulcerated, non-bleeding mass in the hepatic flexure (**Figure** 1). Biopsy of the mass demonstrated features of focal active colitis and erosion without evidence of dysplasia or malignancy. The patient was referred to oncology for further evaluation of the mass. Positron emission tomography-computed tomography (PET-CT) results were remarkable for abnormal thickened appearance of the colon at the hepatic flexure with an adjacent 4.4 cm fatty structure in the proximal transverse colon without fluorodeoxyglucose radiotracer uptake. The patient was evaluated by colorectal surgery and received a robotic-assisted laparoscopic right colectomy with an isoperistaltic ileotransverse colon anastomosis. The specimen was sent to pathology and results demonstrated a 4.4 × 4.0 × 4.0 cm protruding mass with glanular mucosa and submucosal fatty cut surfaces, consistent with angiolipoma. Immunohistochemical (IHC) staining was unremarkable for angiomyolipoma. The patient tolerated the procedure well without significant sequelae.

Discussion: Angiolipomas are typically painful yet benign tumors that are rarely found in the gastrointestinal tract. Although abdominal pain, rectal bleeding, and/or positive fecal occult blood testing are commonly reported on presentation, diagnosis is complicated as symptoms tend to be non-specific. Preoperative diagnosis of angiolipoma is possible when aided by CT, endoscopy, and MRI, but surgical pathology remains the gold standard for final diagnosis of the tumor. When angiolipomas are fully excised, the prognosis is excellent.



[2084] **Figure 1.** Endoscopic identification of malignant-appearing mass in hepatic flexure.

S2085

Rare Case of Small Cell Carcinoma of the Rectum

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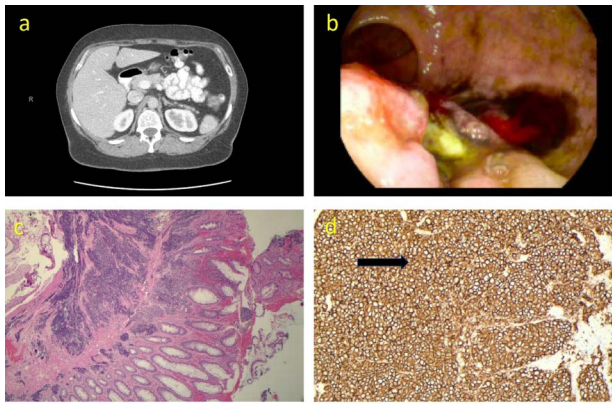
Introduction: Small cell carcinoma most commonly originates in the lung. Colorectal small cell carcinoma is very rare, comprising 0.2% of all colorectal cancers. The incidence of small cell lung cancer (SCLC) was found to be 22-times that of extrapulmonary small cell cancer. Colorectal SCC is highly aggressive and carries a poor prognosis.
Case Description/Methods: Patient is a 42-year-old female with a history of GERD and tobacco abuse who presented for rectal pain, 2 episodes of rectal bleeding, and a 2-month history of worsening constipation. She also endorsed night sweats, fatigue, nausea, and poor appetite. CT abdomen/pelvis showed a perirectal mass measuring 3.3 × 2.2 cm with adjacent mildly enlarged lymph nodes (**Figure** 1a). Colonoscopy then showed an eroded, nodular, and ulcerated mucosa in the distal rectum (**Figure** 1b). The mass was biopsied and pathology revealed small cell carcinoma (**Figure** 1c). Sigmoidoscopy with EUS and rectal biopsy confirmed poorly differentiated small cell carcinoma. Immunohistochemistry revealed that the tumor cells were positive for CD56 (**Figure** 1d), chromogranin, AE1/AE3 and TTF1. MRI showed T4N2 disease with possible involvement of the left levator muscle in addition to positive suspicious left inguinal lymph nodes. Patient was started on cisplatin and etoposide therapy.
Discussion: Small cell carcinoma accounts for 0.1% to 1% of all GI malignancies, with the mean age at diagnosis of 60 years old. Symptoms of rectal small neuroendocrine cancers are similar to those of rectal adenocarcinomas including defecation difficulties, anal discomfort and blood per rectum. Most patients present with distant metastasis on presentation and have generalized symptoms of malignancy including fatigue, weight loss, and anorexia. The prognosis of colorectal SCC is generally poor. The rate of lymph node and liver metastases in colorectal SCC patients are 60%-89% and 20%-71%, respectively. Median survival in previous studies was 11 months with palliative chemotherapy and 1 month with best supportive care (BSC) only. Based on their established role in metastatic SCLC, cisplatin and etoposide have been one of the most widely used regimens in gastroenteropancreatic NEC, improving median survival to around one year. Curative surgery is usually attempted in localized disease, although retrospective series indicate that it is rarely curative as a sole therapeutic modality. Given the high relapse rate observed following radical surgery, platinum-based adjuvant therapy is recommended.



[2085] **Figure 1.** (a) CT scan demonstrating perirectal mass measuring 3.3 × 2.2 cm concerning for metastases with adjacent mildly enlarged lymph nodes. (b) Colonoscopy image showing an eroded, nodular and ulcerated mucosa in the distal rectum. (c) H&E staining at 10× magnification demonstrating the rectal tumor (black arrow) adjacent to normal rectal tissue d. demonstrates Special staining demonstrating positive CD56 tumor cells.

S2086

Colon Cancer Presenting as an Aortic Thrombus, Common Things Can Present Uncommonly

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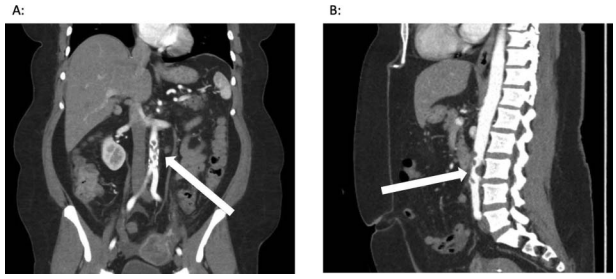
Introduction: Aortic thrombosis is a rare complication of malignancy in the absence of other aortic disease. While venous thrombosis has a well-established association with cancer, arterial thrombosis has not been reported as extensively. We present a case of aortic thrombosis in a patient who was found to have stage 4 adenocarcinoma of the colon.
Case Description/Methods: A 47-year-old female with a past medical history significant for hypothyroidism and DVT secondary to leg fracture presented with sudden onset sharp epigastric abdominal pain and numbness in both legs. Labs were significant for iron deficiency anemia and physical exam was significant for tenderness to palpation in the periumbilical area and right toe cyanosis. Computed tomography angiography (CTA) of the abdomen/pelvis revealed intraluminal thrombi at the distal thoracic aortic arch and the distal abdominal aorta proximal to the bifurcation. She was admitted and started on intravenous heparin, bridged to warfarin, and discharged on hospital day 3. During outpatient follow-up, a transvaginal ultrasound was performed which revealed a 10 cm left adnexal mass. She had an elevated CEA with normal CA-125. Due to iron deficiency anemia, a colonoscopy was performed which revealed an 8.5cm fungating and ulcerated mass in the proximal ascending colon with biopsy positive for adenocarcinoma. Patient underwent a right colectomy, small bowel resection, salpingo-oophorectomy, and an omentectomy. The ovarian mass pathology was consistent with adenocarcinoma of the colon. A diagnosis of stage 4 colon adenocarcinoma was made and she was started on FOLFOX chemotherapy (**Figure** 1).
Discussion: Aortic thrombosis is a rare phenomenon in the absence of aneurysmal disease, dissection, or severe atherosclerosis. While malignancy is a well-studied risk factor for venous thromboembolism, data on its risk for aortic thrombosis is limited. One study indicated that 11.5% of patients with arterial thrombosis had an associated malignancy while another indicated that malignancy increases the risk of arterial thrombosis from 2.2% to 4.7%. Although the pathogenesis remains unclear, mechanisms proposed include the release of thrombin and vascular endothelial growth factor from cancer cells. In terms of management, a simple anticoagulation regime has been showed to be as effective as surgical intervention. A follow-up CT scan is recommended to evaluate for thrombus resolution. In summary, an evaluation for malignancy is recommended in patients presenting with aortic thrombus.



[2086] **Figure 1.** Coronal (A) and sagittal (B) views of CTA abdomen/pelvis. Arrows pointing to intraluminal thrombi in the distal abdominal aorta just proximal to the aortic bifurcation.

S2087

An Unusual Site of Colonic Metastasis From Hormone Positive Breast Cancer

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Introduction: The most common sites for metastasis of breast cancer are brain, bone, liver, and lung. Metastatic involvement of the gastrointestinal tract secondary to breast cancer is very rare. The most frequent sites of gastrointestinal tract involvement are the stomach and the small intestine, while colorectal metastases are even rarer.
Case Description/Methods: We describe a case of a 65-year-old postmenopausal female with a past medical history of Stage III, pT2pN3Mx, grade I, ER positive 74%, PR positive 37%, HER-2 negative, Ki-67 of 30%, 45/46 lymph node positive, invasive breast cancer diagnosed 7 years ago, status post bilateral mastectomy, adjuvant chemotherapy, radiation, adjuvant letrozole therapy and a history of stage IA non-small cell carcinoma status post lobectomy. She presented to the clinic with new-onset back pain and anemia. Upon further investigation, magnetic resonance imaging (MRI) of her spine revealed thoracic spine compression and her colonoscopy revealed an area of mucosal irregularity in the descending colon. Colonic biopsy and bone biopsy revealed evidence of metastatic mammary cancer which was ER positive 70%, PR negative, HER2 negative and Ki-67 of 2%. No surgical intervention was suggested by colorectal surgery for her colonic metastatic disease. Multidisciplinary team decision was made to proceed with systemic therapy. She started with a few cycles of systemic chemotherapy followed by hormone therapy with faslodex and abemaciclib. She tolerated chemotherapy well except for mild peripheral neuropathy and hand-foot-mouth syndrome. Restaging scans with positron emission tomography and computed tomography (PET CT) after 6 months post systemic therapy did not show any evidence of disease. Currently, she remains in remission with regular monitoring of her disease with imaging and colonoscopies.
Discussion: Recurrence of breast cancer to an unusual site can often be misdiagnosed as primary cancer. The diagnosis of colonic metastasis is often difficult due to its unclassical presentation and rarity. Any new suspicious lesion in a patient with a history of breast cancer should be pathologically diagnosed before any surgical intervention. Immunohistochemical staining of the metastatic lesion is essential to evaluate the benefit of anti-hormonal therapy. Surgical resection should be reserved as a final treatment option as surgical resection has not been shown to improve overall survival.

S2088

Glucagon-Like Peptide-1 Receptor Agonist-Associated Colonic Ischemia: A Case Report

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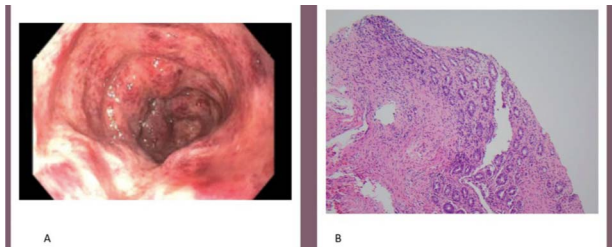
Introduction: Colonic ischemia is a well-recognized disease process with both modifiable and non-modifiable risk factors. While most cases are mild and self-limited, some patients experience significant distress requiring hospitalization, surgery, and rarely death. Recognizing and preventing modifiable risk factors is paramount.
Case Description/Methods: A healthy 56-year-old female presented to the emergency department with 10 days of worsening bright red blood per rectum, tenesmus, and intermittent upper abdominal pain. She denied any other symptoms or recent travel. Two months prior she was started on weekly 0.25 mg subcutaneous semaglutide injections for weight loss. She described decreased thirst and appetite since starting the medication. Her last colonoscopy was 2 years prior and unremarkable. Presenting vital signs were stable with no documented hypotension. BMI was 27 kg/m^2. Physical exam was unremarkable. Patient's blood work was unrevealing, including normal lactic acid. CT abdomen pelvis with IV contrast showed isolated acute sigmoid colitis and mesenteric duplex was negative for ischemia. MRI was performed of the abdomen due to concern for portal vein clot on CT scan which confirmed portal vein thrombus. Hematology was consulted, the patient was started on full dose anticoagulation, and coagulopathy workup was unrevealing suggesting the clot was a manifestation of colonic ischemia. Infectious stool studies were negative. Flexible sigmoidoscopy revealed severe localized inflammation in the mid sigmoid colon (**Figure** 1A). Biopsies demonstrated colonic mucosa with focal lamina propria fibrosis, hemorrhage, and reactive regenerative changes, suggestive of ischemic colitis (**Figure** 1B). The patient improved with intravenous fluids and antibiotics to prevent bacterial translocation. She was discharged home on day 3 with the recommendation for indefinite semaglutide discontinuation.
Discussion: There are no known reports of high-dose GLP-1 receptor agonists (GLP-1-RAs) leading to colonic ischemia when taken for weight loss. Multiple potential mechanisms exist including periods of hypotension due to decreased food and water intake. Further, delayed gastric emptying is a known feature of GLP-1-RAs and can be a manifestation of decreased gastric vascular supply. Interestingly, experimental intestinal ischemia demonstrated rapidly increased GLP-1 levels suggesting a possible correlation. Further investigation into the safety of high dose GLP-1 RAs for weight loss is recommended.



[2088] **Figure 1.** A, Flexible sigmoidoscopy showing severe inflammation isolated to the sigmoid colon with loss of vascularity, friability, edema, erythema, and mucous. B, Pathology findings demonstrating focal lamina propria fibrosis, hemorrhage and reactive regenerative changes, suggestive of colonic ischemia.

S2089

Incidental Vanek's Tumor on Routine Screening Colonoscopy

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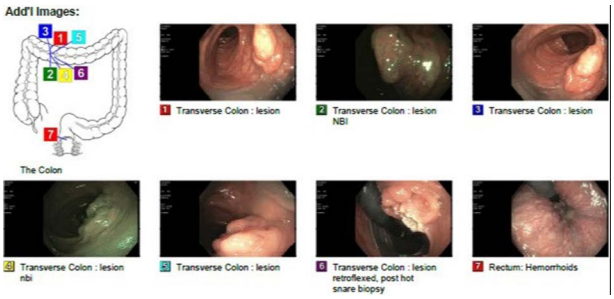
Introduction: Vanek's Tumors, otherwise known as Inflammatory fibroid polyps, are a rare type of benign tumor representing less than 0.1% of all gastric or small bowel polyps. Most of these tumors are smaller than 15mm and are usually asymptomatic; however, if the lesion is large or symptomatic with bleeding, chronic anemia, or gastric outlet obstruction, surgical resection can be performed. This case adds to this scarce literature by presenting an asymptomatic 49-year-old gentleman who was found to have a 2cm Vanek's Tumor at the hepatic flexure on routine colonoscopy for colorectal cancer screening.
Case Description/Methods: Our patient is a 49-year-old male with no significant past medical history that initially presented to for routine colorectal cancer screening. Upon initial screening colonoscopy, patient was found to have sigmoid diverticulosis as well as a 2 cm submucosal polypoid lesion at the level of the hepatic flexure. Initial biopsies showed normal mucosa. Follow up CT Abdomen/Pelvis with contrast showed no irregularities. Due to concerning physical features of the initial hepatic flexure lesion, the patient was scheduled for a repeat colonoscopy with biopsies in 3 months. On repeat colonoscopy, the 2 cm submucosal appearing polypoid lesion was again appreciated at the hepatic flexure. Hot snare biopsy was used to obtain more tissue and revealed a benign inflammatory fibroid polyp, further classified as a Vanek's Tumor. Due to the lesion's benign nature and the patient being asymptomatic, a repeat colonoscopy was scheduled in 10 years with no more need for further workup (**Figure** 1).
Discussion: At 45 years old, the United States Preventative Task Force recommends routine colorectal cancer screening with colonoscopy every 10 years or less depending on pertinent findings. Vanek's Tumors are rare gastric or small bowel inflammatory fibroid polyps with literature review only describing 5 cases of these tumors within the large bowel. Most Vanek's Tumors are small (<15 mm) and asymptomatic, therefore fitting the criteria for continued surveillance colonoscopy at 10-year intervals, in concordance with our patient. In rare cases, these tumors can cause symptoms such as gastric outlet obstruction, severe constipation, acute bleeding, or chronic anemia, at which these tumors should be evaluated for surgical resection to alleviate symptoms. When encountering benign polyps, physicians should always be aware of morphology, size, and overall patient symptomatology to make appropriate management decisions for the patient.



[2089] **Figure 1.** Hepatic Flexure Lesion (20 mm).

S2090

A Unique Case of Brain Metastasis Leading to the Diagnosis of Primary Cecal Adenocarcinoma

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Introduction: We present A rare case of primary cecal adenocarcinoma with metastasis to the brain. Furthermore, the brain metastasis was the initial finding, which in turn led to the diagnosis of colon cancer. This case portrays the relevance of understanding that although rare, colon cancer can metastasize to the unlikeliest of anatomical locations.
Case Description/Methods: A-42-year old white female with no significant past medical history and no family history of colon cancer presented to the emergency room after her husband noticed minor behavioral changes. He stated she had been losing her balance and had recently been involved in 3 minor car accidents, which was uncharacteristic of her. She reported experiencing fatigue, headaches, and nausea with weakness for the month prior to evaluation. Further detailed history taking revealed very few episodes of constipation and mild epigastric pain. She denied any changes in stool caliber, blood in her stool, melena or weight loss. Magnetic resonance imaging of the brain was performed and demonstrated a large frontal enhancing mass with significant surrounding edema. She underwent a craniotomy and pathology was suggestive of a primary gastrointestinal malignancy. Colonoscopy was performed and biopsy confirmed a well differentiated primary cecal adenocarcinoma. The patient was referred to Hematology/Oncology for treatment options.
Discussion: Neurological symptoms do not usually allude to colon cancer and, although extremely rare, primary colon cancer with metastasis to the brain can be seen. This was a perplexing case, as the initial symptoms led to the diagnosis of brain metastasis, which in turn led to the diagnosis of primary cecal cancer. Despite exhibiting no gastrointestinal symptoms, the patient had widespread metastatic cancer affecting 2 diverse organs. Therefore, a multidisciplinary approach with the use of specialists for further analysis was utilized. In this case, Gastroenterology, Hematology/ Oncology and Neurology combined to successfully diagnose and treat the patient.

S2091

Sevelamer-Induced Colitis

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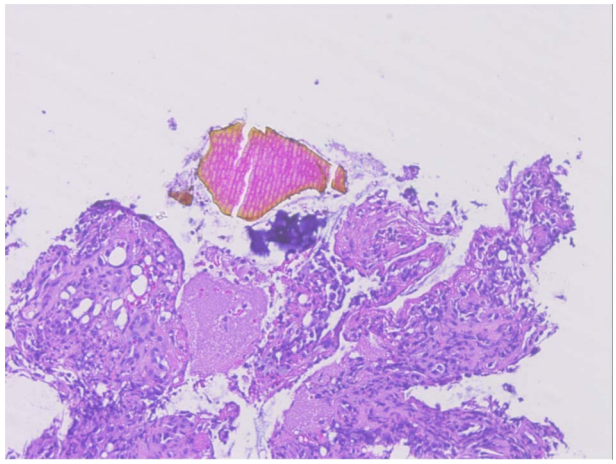
Introduction: This case describes an under-recognized adverse effect of sevelamer on the gastrointestinal tract.
Case Description/Methods: A 57-year-old woman with type 2 diabetes and ESRD on peritoneal dialysis (PD) was admitted to the hospital for right foot cellulitis treated with intravenous clindamycin. She developed right lower quadrant abdominal pain with non-bloody diarrhea on hospital day 6. CT of the abdomen and pelvis revealed cecal and ascending colon wall thickening. Peritoneal fluid drawn from the PD catheter was cloudy with 5046 WBC/cm^3. 2 days later, she developed nausea and vomiting at which time repeat imaging showed partial small bowel obstruction with a transition point in the mid-ileum. Her symptoms improved with nasogastric tube decompression. The colon wall thickening and bowel obstruction were initially attributed to peritoneal fluid infection related to the PD catheter and further peritoneal effluent culture showed decreasing WBC count with antibiotics. Her symptoms did not improve and one week later she developed hematochezia. The physical examination was remarkable for right lower quadrant tenderness. Stool studies were negative for infection. Colonoscopy was performed and showed erythematous and edematous mucosa at the ileocecal valve and an area of ulcerated circumferential mucosa in the proximal ascending colon. Biopsy showed mucosal ulceration associated with sevelamer crystals with a characteristic pink and yellow fish-scale appearance. Sevelamer had been initiated during this hospitalization 4 days prior to development of symptoms. The patient's symptoms resolved within 48 hours of stopping this medication (**Figure** 1).
Discussion: This case attempts to increase physician awareness of sevelamer-induced gastrointestinal injury. Our patient presented not only with colitis but also small bowel obstruction from enteritis and ileocecal valve inflammation. Swanson et al were the first to report a series of 15 patients with a spectrum of mucosal injury involving the esophagus, small bowel and colon. Multiple reports have described the effects with the most severe being colonic obstruction, ischemic necrosis and perforation. A review of 19 cases identified no association between the dose of sevelamer and severity of injury. The potential mechanism for injury is deposition of this insoluble polymer in gastrointestinal mucosa like its resin counterpart, kayexalate. Prompt discontinuation of the medication can potentially prevent further injury and catastrophic complications such as perforation.



[2091] **Figure 1.** Sevelamer crystal in the center associated with mucosal ulceration and fibrinopurulent exudate. It is rectangular in shape and usually 2-toned in color on H&E-stained sections, with a pink center and yellow edges; exhibiting a fish-scale like appearance (H &E, ×100).

S2092

Plasmacytomas and Polyps: A Perplexing Presentation

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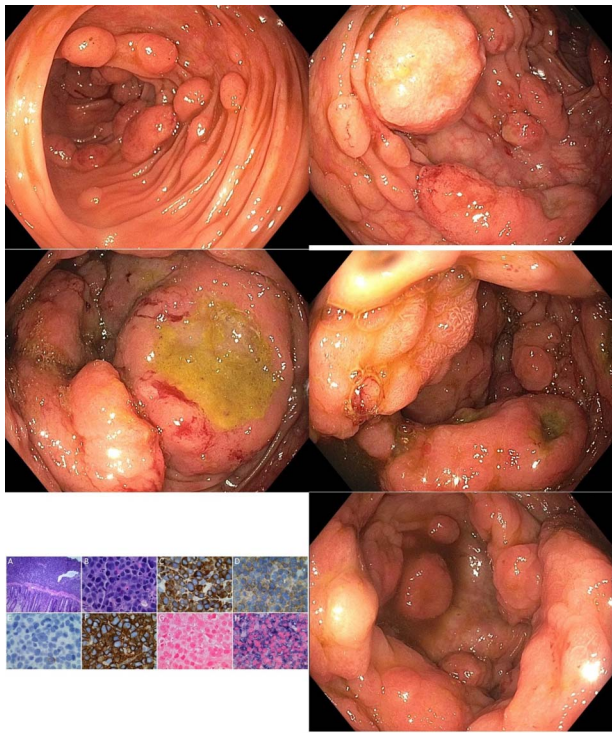
Introduction: Plasmacytomas are rare tumors involving plasma cells that arise from either bone or mucosal surfaces throughout the body. These are generally classified as either bone plasmacytomas or extramedullary lesions. Extramedullary lesions can occur in organs or soft tissues and are thought to be a manifestation of hematogenous dissemination. Extramedullary plasmacytomas (EMPs) make up less than 5% of all plasma cell tumors, and when identified are usually located in the respiratory tract. Gastrointestinal involvement has been reported to be extremely rare.
Case Description/Methods: An 80-year-old male with history of acute lymphoid leukemia, multiple myeloma (MM), and pancytopenia (secondary to chemotherapy) was admitted for acute renal failure. The patient reported diarrhea and increasing fatigue over the previous several weeks. Stool evaluation for infectious etiologies was unrevealing. Labs demonstrated significantly increased fLLC of 974 (fKLC 0.08), as well as decreased IgG, IgA, and IgM. Serum protein electrophoresis demonstrated an IgG lambda paraprotein spike, suggestive of MM relapse. A CT scan of the abdomen and pelvis demonstrated irregular thickening of the cecum and ascending colon. A colonoscopy was performed and revealed innumerable large polypoid masses throughout the colon. The mass burden predominated in the cecum and ascending colon. Many of the masses had large ulcerations, up to 2 cm in diameter. Biopsies were obtained confirming plasma cell neoplasia (**Figure** 1).
Discussion: The incidence of EMPs at the time of diagnosis of MM is 7 to 18% and up to 20% at relapse. EMPs may be more frequent after treatment with novel agents, but this remains to be proven. Mechanisms of extramedullary spread may include decreased adhesion molecule expression and downregulation of chemokine receptors. Current and future studies will focus on the mechanisms of myeloma cell adhesion, myeloma growth at extramedullary sites, and drug sensitivity. Gastrointestinal EMPs have rarely been reported in the medical literature. Colonic involvement has been even more rarely described, with less than a handful of cases described with the diffuse nature and burden of colonic disease as seen in our patient. Our case demonstrates the need for clinicians to consider colonic plasmacytoma as a contributing etiology for patients presenting with chronic diarrhea, a negative infectious workup, and history of either active or past multiple myeloma.



[2092] **Figure 1.** Histology slides: CD3 – positive multiple myeloma involving the colon in an 80 year old male. A and B, Atypical large cell proliferation involving the mucosa and submucosa of the right colon. The malignant cells are positive for CD3 (C), CD4 (D), CD138 (F), and lambda light chain (H). The malignant cells are negative for CD20 (E), and kappa light chains (G). (A: H&E stain 100× magnification; B: H&E stain 1000× magnification; C–F; immunohistochemical stains 1000× magnification; G and H: chromogenic in-situ hybridization stains 1000× magnification).

S2093

Painless Voluminous Rectal Bleeding: It's Not Always a "Tic": A Case of a Recto-Sigmoid Hemangioma

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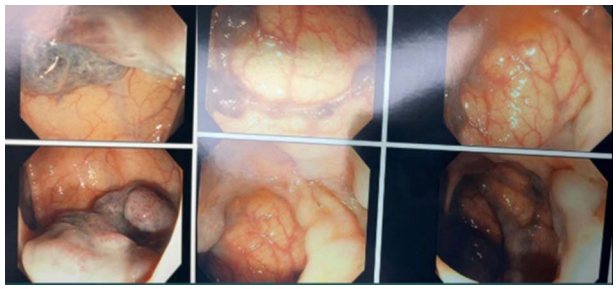
Introduction: Hemangiomas are known as benign vascular tumors and may present as multiple or solitary lesions. Very few cases of colonic hemangiomas have been reported in literature. We present a case of rectal bleeding leading to a finding of recto-sigmoid hemangioma.
Case Description/Methods: A 31-year-old female with no past medical history presented to the ED with complaints of bright red blood per rectum (BRBPR). She admitted to having 4 days of blood clots associated with bowel movements, in addition to diffuse lower abdominal pain which has occurred intermittently and progressively worsened for the past 2 years. In Cuba, she was told she had a rectal tumor which was "inoperable". Lab work on admission was significant for iron deficiency anemia. CT of the abdomen and pelvis with oral and IV contrast revealed findings consistent with active gastrointestinal (GI) bleed in the ascending colon, as well as a 2.5 cm pelvic mass. However, an IR arteriogram revealed a large segment of angiodysplasia in the ascending colon but no evidence of active GI bleed. Transvaginal ultrasound ruled out an adnexal mass. Sigmoidoscopy revealed a large recto-sigmoid mass suspicious for an hemangioma as well as surrounding vascular ectasias. Carefully taken biopsies revealed a benign rectal hemangioma. Ultimately, the patient was stabilized and discharged, with follow-up outpatient with surgical oncology due to the extent of her disease (**Figure** 1).
Discussion: Colonic hemangiomas are extremely rare benign vascular lesions of the GI tract. Often located in the recto-sigmoid, they may be discovered during workup for recurrent painless rectal bleed and rarely presenting as life-threatening bleeding. Large cavernous hemangiomas may be associated with Kasabach-Merritt syndrome, hemolytic anemia, thrombosis and bowel ischemia. Studies reveal that it may take on average up to 19 years before a proper diagnosis is established. There are few reported cases of local invasion to surrounding structures such as bladder and uterus. Despite being incidentally found in colonoscopy, insufflation may flatten these lesions which may be also misinterpreted as proctitis. Imaging studies such as MRI, CT and rectal EUS are helpful in determining the diagnosis. Sclerotherapy, angiographic embolization and ligation of mesenteric vessels may be attempted for small lesions. Surgical resection, if possible, is generally the treatment of choice for more extensive lesions. Due to its mimicking presentation of common GI diseases, hemangiomas risk being overlooked.



[2093] **Figure 1.** Extensive recto-sigmoid hemangioma with associated vascular ectasias.

S2094

Polyp That Wears a Cap: A Case of Inflammatory Cap Polyposis Mimicking Neoplasm

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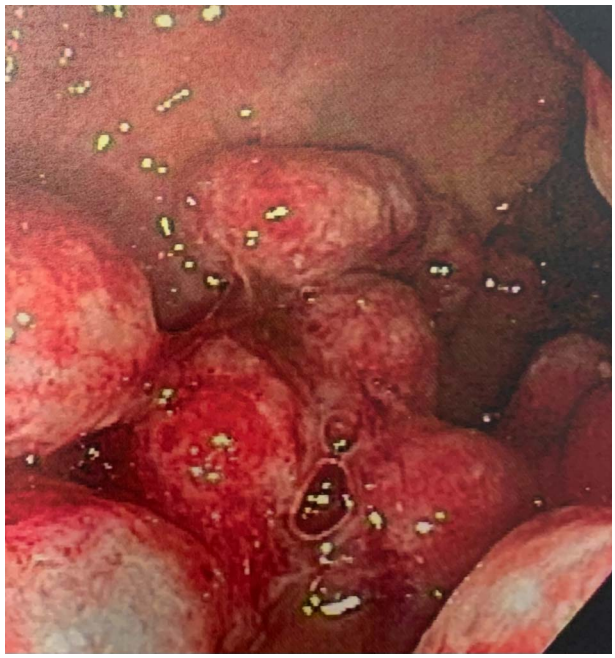
Introduction: Inflammatory cap polyposis (ICP) is a rare and benign condition with findings of multiple inflammatory polyps of granulation tissue with a cap of fibrinopurulent mucus. ICP can mimic an aggressive colon pathology. It is occasionally misdiagnosed as Inflammatory Bowel Disease (IBD) or colorectal cancer leading to unnecessary interventions. We present a severe case of ICP which led to more than 30 colonoscopies and polypectomies.
Case Description/Methods: 73-year-old man with smoking history presented with chronic constipation, mucus in stool and painless hematochezia. Colonoscopy revealed ulcerated, friable polyps with mucus plug in the rectosigmoid area. Pathology showed hyperplastic, tubular, and tubulovillous adenomas. IBD and infectious workup were negative. He received Miralax for constipation and Balsalazide for UC from 2013 to 2020 but continued to have polyps. Given perceived precancerous polyp burden with gross aggressive appearance, hemicolectomy was initially proposed. Review of pathology, however, confirmed that the polyps had similar features of ICP. He has undergone multiple colonoscopies each requiring several cold snare polypectomies. His symptoms and polyp burden have significantly improved and in the last colonoscopy, he had less than 5 benign polyps (**Figure** 1).
Discussion: Since being introduced in 1985, ICP's etiology and therapy are unknown. It has been linked to abnormal colonic motility causing mucosal prolapse, luminal trauma, dysbiosis of gut microbiota, and chronic infections with *H. pylori* or *E. coli*. It can be asymptomatic or present with abdominal pain, chronic constipation, tenesmus, mucoid diarrhea, hypoproteinemia and hematochezia. Endoscopically, it can appear as sessile, semi-pedunculated, or plaque with a white superficial surface as large as a few centimeters. Histologically, it has an overlying eroded fibrinopurulent "cap" with elongated and dilated crypts full of mucus and inflammatory cells. Few proposed treatments include treatment for constipation, dietary modifications, antibiotics, steroid course, polypectomy, and colectomy. However, recurrence is common including those who underwent colectomy. Gastroenterologists and pathologists should be familiar with this rare pathology to prevent misdiagnosis and unnecessary treatment or interventions. More research needs to be done to evaluate preventive and curative therapy for this benign pathology.



[2094] **Figure 1.** Ulcerated, friable pedunculated polyps with mucus caps in the rectosigmoid region.

S2095

Osseous Metaplasia in a Colon Polyp

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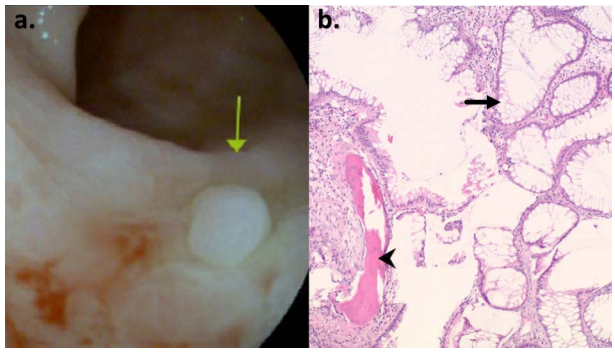
Introduction: Osseous metaplasia is a heterotopic bone formation that has been described in a wide variety of tissue types, both neoplastic and inflammatory lesions. However, its occurrence in colorectal cancer is exceedingly rare. Bone formation in a rectal polyp was first described in 1981. We describe a rare case of osseous metaplasia in rectal mucosa with a nearby hyperplastic polyp.
Case Description/Methods: A 36-year-old male presented to the clinic complaining of diarrhea and hematochezia that had been ongoing for several years. He had a history of infrequent NSAID use but denied anticoagulant or antiplatelet use. He noticed hematochezia several times a day. He did not notice any rectal mass, swelling, or pain. He denied any abdominal pain, vomiting, or melena. The patient underwent a

colonoscopy, revealing a 7 mm sessile polyp in the rectum (**Figure** 1a). The polyp was removed by a cold snare and was sent for histopathological evaluation. Histopathology of the hyperplastic polyp demonstrated osseous metaplasia with foreign body reaction (**Figure** 1b).

Discussion: Osseous metaplasia of the gastrointestinal tract is an exceedingly rare phenomenon with a prevalence of less than 1%, with osseous metaplasia of the rectum accounting for 0.4% of cases. Although osseous metaplasia is a well-defined phenomenon, the pathogenesis is still unclear. Osseous metaplasia secondary to a malignant lesion has been hypothesized to be due to the presence of bone morphogenetic protein (BMP), which belongs to the TGFβ family. The underlying mechanism seems to be the recruitment of undifferentiated stromal mesenchymal cells into osteoprogenitor cells or fibroblasts, a phenomenon termed epithelial-mesenchymal transformation. Kypson et al. demonstrated the overexpression of BMP-2 in tumor cells from cases of rectal adenocarcinoma with osseous metaplasia compared to those lacking bone formation. An alternative mechanism proposed is the increased expression of osteocalcin and upregulation of type-1 collagen and osteonectin, markers of bone matrix synthesis. Multiple theories exist regarding the development of metaplasia in malignant lesions. However, benign lesions have only been linked with chronic inflammation, as described in our case. Given the rarity of this condition, no large trials have been conducted to establish clear guidelines on surveillance of benign or malignant masses with osseous metaplasia. Therefore, the prognosis in metastatic lesions remains unclear.



[2095] **Figure 1.** (a) 7 mm rectal polyp (yellow arrow) seen on colonoscopy and subsequently removed by cold snare technique. (b) Histology specimen (×80 magnification) obtained from a rectal mucosa biopsy demonstrating osseous metaplasia (Arrowhead) with benign foreign body reaction. Figure also demonstrates the osseous metaplasia surrounded by normal colonic mucosa and crypts (Arrow).

S2096

PALB2 and the Risk for Colorectal Cancer

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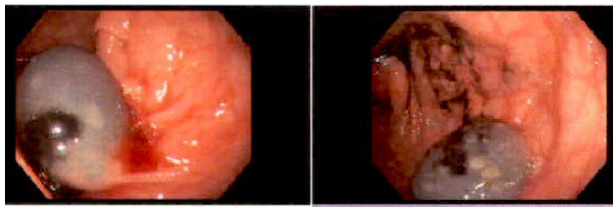
Introduction: Colorectal cancer (CRC) is the most prevalent cancer in the gastrointestinal system and the third leading cause of cancer-related deaths in the United States. Hereditary factors play an important role in the risk of CRC and it has been estimated that up to 30% of CRC cases are affected by genetic factors. However, mutations in CRC-susceptibility genes explain less than 10% of CRC cases. Germline mutations in deoxyribonucleic acid (DNA)-repair genes have recently been reported more frequently in CRC. PALB2 is one such germline mutation that was recently evidenced as a CRC risk gene. We present a case of a female patient diagnosed with invasive sigmoid adenocarcinoma in the setting of no significant risk factors except for positive gene testing for PALB2.

Case Description/Methods: A 32-year-old female with no significant past medical history presented with an episode of painless, large-volume bright red blood per rectum. She endorsed a 2-month history of intermittent rectal bleeding noted on wiping. Complete blood count revealed a microcytic anemia with hemoglobin of 8.4. Iron panel was consistent with anemia of chronic disease. Colonoscopy revealed a large, infiltrating and partially obstructing mass in the recto-sigmoid colon measuring 6 cm with evidence of mucosal bleeding. Biopsy confirmed invasive adenocarcinoma. Computed tomography (CT) of the abdomen showed multiple hypodense hepatic lesions suggestive of metastatic disease (**Figure** 1).

Discussion: Mutations in PALB2 have been associated with an increased risk of familial cancers including breast, pancreatic, and gastric cancers. PALB2 encodes a protein that functions in tumor suppression and is primarily involved in the DNA repair process. PALB2 is altered in 2.8% of colorectal cancer cases. One study proved that PALB2 was an independent prognostic factor in CRC. Further studies on mutations involving PALB2 in CRC can help delineate a patient's risk for malignancy and provide vital information for gastric cancer prevention. It will also allow for more personalized treatment options to have improved survival outcomes.



[2096] **Figure 1.** Malignant, partially obstructing tumor in the recto-sigmoid colon that was about 19 to 25 cm from the anal verge.

S2097

Persistent Abdominal Pain Linked to Tuberculous Colitis

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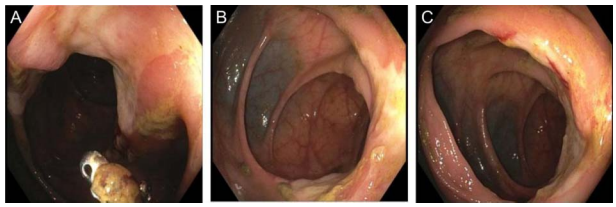
Introduction: Tuberculous colitis is a rare form of tuberculosis (TB) and often presents with non-specific gastrointestinal (GI) complaints. Roughly 2% of TB cases are related to the GI tract. Diagnosis is challenging as its non-specific presentation mimics other GI disease processes. This case report highlights how a thorough patient history and work-up are crucial for timely diagnosis and treatment of TB colitis.

Case Description/Methods: A 70-year-old male with a history of missionary work in Haiti presented to our clinic with abdominal pain and iron deficiency anemia (IDA). His abdominal pain was right-sided, non-radiating, with associated night sweats and a 25-pound weight loss. While in Haiti, he was exposed to TB but purified protein derivative skin testing was negative at that time. Laboratory values were significant for IDA and elevated ESR. Upper and lower endoscopies were notable for deep ulcerations at the ileocecal valve and hepatic flexure, as well as severe terminal ileum stenosis. Biopsies revealed granulomatous inflammation without crypt architectural distortion. A computed tomography scan of the abdomen revealed colonic thickening extending to the splenic flexure. Repeat colonoscopy revealed deep ulcerations at the hepatic flexure and biopsies demonstrated non-specific inflammation. Samples sent for acid fast bacilli and culture reported growth on the AFB medium, but due to bacterial contamination, a final identification was unobtainable. He was referred to infectious disease and began a 4-drug regimen for *Mycobacterium tuberculosis*. However, due to persistent symptoms, he was referred to general surgery and underwent right hemicolectomy. Following surgery, he had improvement in symptoms (**Figure** 1).

Discussion: Tuberculous colitis is a rare form of TB and often presents with non-specific GI complaints. There are no clear diagnostic algorithms, although biopsy is one of the first recommended interventions. Other reports suggest monitoring CD4 counts and polymerase chain reaction—both require validation. Due to its generalized presentation, TB colitis can be mistaken for inflammatory bowel disease, as seen in

our patient with ileocecal involvement. Our case is unique in that symptoms persisted and the disease progressed, despite antituberculin therapy. Studies report resolution of TB colitis following secondary rescue regimen; however, our patient's disease process was more extensive. As with our patient, if antituberculin therapy is ineffective, surgery may be the only definitive therapy.



[2097] **Figure 1.** (A and B) Lesion with inflammation prior to biopsy. (C) Lesion post-biopsy.

S2098

Pop Goes the Colon! An Unusual Case of Cecal Perforation

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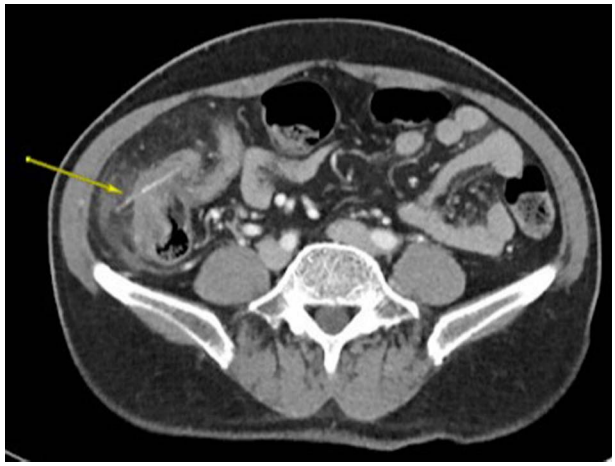
Introduction: Perforation of the cecum presents with lower quadrant abdominal pain that may be acute or subacute, depending on the level of containment. The cecum is one of the most common locations of perforation given it is the thinnest portion of the large intestine. Perforation of the cecum usually occurs due to neoplasm or diverticulitis. Iatrogenic causes with foreign body ingestion are rare causes of cecal perforation. We present a case of a 72-year-old male with acute, progressive right lower abdominal pain, found to have cecal perforation secondary to a foreign body ingestion.
Case Description/Methods: A 72-year-old man presented to the emergency department complaining of right, lower abdominal pain for 3 days. The pain was described as constant and worsened upon deep breathing. He denied fever, chills, nausea, vomiting or hematochezia. Initial labs were significant for a leukocytosis of 16.1 K/uL. He was started on flagyl, cefepime and vancomycin. Computed Tomography (CT) abdomen and pelvis revealed a linear hyperdense structure within the cecum, transferring across the cecal wall into the peritoneum, concerning for a cecal perforation (**Figure** 1). The patient was taken for an exploratory laparoscopy with general surgery. A 4-inch plastic toothpick was found penetrating through the cecum with surrounding inflammation. The findings prompted a right hemicolectomy with primary anastomosis. The patient later admitted to swallowing a plastic toothpick. He was monitored closely post-operatively. Upon regaining bowel function and medical stability, he was discharged home.
Discussion: Diagnosis of cecal perforation is made primarily through clinical presentation and imaging studies. Initial management of a patient of suspected intestinal perforation includes intravenous fluid therapy and broad spectrum antibiotics. A conservative treatment approach may be chosen if the patient is without signs of sepsis, perforation is contained, or there is evidence of limited contamination of surrounding tissues. As seen in our patient, operative management is indicated due to evidence of perforation with surrounding tissue involvement. Resection of colon is indicated when devascularization of the colon wall is present.



[2098] **Figure 1.** CT abdomen and pelvis revealed a linear hyperdense structure (yellow arrow), transferring across the cecal wall into the peritoneum, concerning for cecal perforation secondary to a foreign body with surrounding inflammatory changes.

S2099

Persistent Damage to the Gut Microbiome Following Messenger RNA SARS-CoV-2 Vaccine

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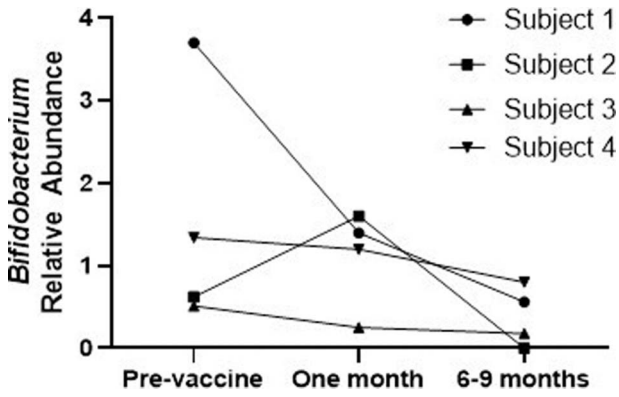
Introduction: Messenger RNA vaccines for SARS-CoV-2 are widely distributed, yet their effect on the human gut microbiome, especially long-term up to one year, is unknown. The human gut microbiome is an essential determinant of human health. Genus *Bifidobacteria* decline is associated with inflammatory bowel disease, obesity, neurological disorders, *C. difficile* infection and severe COVID-19.
Case Description/Methods: We longitudinally recorded the relative abundance of genus *Bifidobacteria* in 4 subjects before receiving mRNA vaccine (Pfizer or Moderna), approximately one month after vaccine, and 6 to 9 months later. Additional SARS-CoV-2 vaccines were given during that period, totaling 2 to 3 doses. Samples were collected at the timepoints mentioned. There were no diet changes or new medication's during the entire period and subjects were told to stay on the same regimen throughout the 6 months. Metagenomic next generation sequencing-based methods were applied to samples obtained from fecal collection. DNA was extracted, and the library prepped, enriched and sequenced on an Illumina Nextseq 550 system. Relative abundance of *Bifidobacteria* decreased after 1 month to in 3 of 4 subjects to: 38%, 258%, 49% and 90% of pre-vaccine levels. After 6-9 months, all *Bifidobacteria* relative abundance decreased to: 15%, 0%, 35%, and 60% of pre-vaccine levels. This study is IRB approved (**Figure** 1).
Discussion: This is the first study to demonstrate a decrease in relative abundance of genus *Bifidobacteria* bacteria 6-9 months after SARS-CoV-2 vaccination. All subjects dropped below a 1% relative abundance. Although a small sample, these findings may suggest a potential mechanism for post-vaccination complications; however, no subjects in the study demonstrated significant complications. Gut dysbiosis post mRNA SARS-CoV-2 vaccines could potentially be a future indication for restoration of *Bifidobacteria* either orally or directly via fecal transplant.



[2099] **Figure 1.** *Bifidobacteria* relative abundance demonstrates a lasting decline after SARS-CoV-2 mRNA vaccination.

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S2100

Rare Endoscopic Findings of Metastatic Breast Cancer on Random Colon Biopsies

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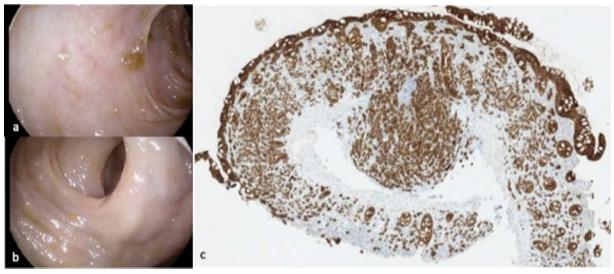
Introduction: Breast cancer is a highly prevalent malignancy among females with a relatively high survival rate. However, distant metastasis is known to be a significant cause of mortality most often affecting the bone, lung, or liver. Gastrointestinal tract involvement is rare with the diagnosis of colonic metastasis requiring endoscopic biopsies for histologic confirmation. Here, we report a case of metastatic breast cancer with an unusual endoscopic presentation of diffuse edema and pallor throughout the colon.
Case Description/Methods: A 69-year-old female with history of triple-negative breast invasive lobular carcinoma with known metastatic disease to the bone, upper gastrointestinal tract, and liver presented to our hospital with acute on chronic diarrhea. The patient reported diffuse crampy abdominal pain along with up to 12 loose, non-bloody stools per day. On initial evaluation, the patient was afebrile and hemodynamically stable with a normal abdominal exam and labs revealing a mild leukocytosis. CT scan of the abdomen showed mild diffuse circumferential wall thickening of the colon, most prominent in the right and transverse colon. Additional lab tests for infectious, autoimmune, endocrine, and inflammatory etiologies were negative. She then underwent a colonoscopy, which showed diffuse edema and pallor throughout the colon with no masses, erythema, ulcerations, or evidence of endoscopic colitis. Random colon biopsies revealed fragments of colonic mucosa with diffuse atypical cellular infiltrate in lamina propria positive for pan-cytokeratin, consistent with metastatic disease from the patient's known mammary lobular carcinoma (**Figure** 1).
Discussion: Breast cancer metastasis to the gastrointestinal tract is rare. Colonic metastases have been described as obstructive masses with stenosis, strictures with inflammation, polyps or linitis plastica. One case also found diffuse colonic erythema with decreased vascularity and haustra. Our patient had unusual endoscopic findings of diffuse edema and pallor extending throughout the entire colon. This case adds to the range of pathology seen on endoscopy in patients with breast cancer further emphasizing the need for colonic biopsies for histologic confirmation of metastatic disease. Although an infrequent site of metastasis, colonic involvement should be considered as part of the differential diagnosis for diarrhea in patients with breast cancer especially in those with lobular histology.



[2100] **Figure 1.** Colonoscopy findings of diffuse edema and pallor of the (a) descending colon (b) sigmoid colon. (c) The infiltrating atypical cells in the lamina propria are strongly and diffusely positive for pancytokeratin confirming the diagnosis of metastatic mammary lobular carcinoma (10×).

COLON

S2101

Pulmonary Edema Secondary to Large Volume Bowel Preparation

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Introduction: Polyethylene glycol 3350 and electrolytes (PEG) is a perceived safe and commonly prescribed solution prior to colonoscopy, yet case reports suggest the potential for volume overload. We describe a patient with cardiopulmonary comorbidities who developed pulmonary edema and acute hypoxic respiratory failure (AHRF) due to PEG administration.
Case Description/Methods: A 55-year-old man with interstitial lung disease (ILD), mild pulmonary hypertension (pHTN), and coronary artery disease (CAD) with multiple coronary stents was admitted to our tertiary academic hospital with cough and constitutional symptoms. He had a brain natriuretic peptide (BNP) of 50 pg/mL, was found to be in AHRF and intubated due to labored breathing. He received broad-spectrum antibiotics and corticosteroids with clinical improvement and within 4 days was extubated. Given his severe ILD, he was evaluated for lung transplant. As part of this evaluation, mandatory colon cancer screening was needed in the form of computed tomography (CT) colonography. He had difficulty consuming Golytely at an appropriate rate. Despite 16 liters (L) of PEG over 3 days, the stools were not clear. He then re-developed hypoxia and tachypnea and BNP rise to 475 pg/mL. Chest X-ray (CXR) showed new bilateral opacities concerning for pulmonary edema. Echocardiography demonstrated an IVC greater than 2.0 cm without respiratory variation consistent with volume overload. His bowel prep was held, and he was given diuretics with improvement in his respiratory status, BNP, and CXR. The patient was re-trialed on 6L PEG by nasogastric tube successfully without cardiopulmonary complications and his CT colonography showed no colonic polyps or malignancy. He eventually underwent successful bilateral orthotopic lung transplant.
Discussion: Prior research has shown that consumption of 6-8 L of PEG increases mean plasma volume by 5.88% on average, but up to 29.8% in some patients. In this case, our patient consumed double that amount of PEG, with subsequent increase in plasma volume, resulting in pulmonary edema and AHRF due to limited respiratory reserve from his severe ILD, pHTN, and CAD. Literature review shows less than 10 cases worldwide with similar findings. In high-risk patients such as the one described, providers must consider judicious use of PEG for colonoscopy preparation and be quick to identify PEG-associated pulmonary edema as an etiology for respiratory decompensation.

S2102

Protean Proctidites: The Diagnostic Challenges of Rectal Chlamydia—A Case Series

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Introduction: Chlamydia trachomatis (*C. trachomatis*) is a common sexually transmitted bacterial infection with rising incidence. Diagnosis can be challenging as the infection is often asymptomatic. Additionally, lack of awareness of the condition can contribute to missed diagnosis in patients with proctitis symptoms. We present a case series of 2 patients with rectal chlamydia highlighting their distinct clinical presentations and diagnostic challenges.
Case Description/Methods: Case 1: A 33 year-old man with human immunodeficiency virus (HIV) on antiviral therapy presented with rectal pain and bleeding for 2 months with multiple emergency room visits and a surgical evaluation. Unable to tolerate an anoscopy due to pain, he received therapy for a possible anal fissure. Labs showed a normocytic anemia and an undetectable HIV viral load. Computed tomography (CT) of the abdomen showed rectal and distal sigmoid thickening. Colonoscopy showed a 5 cm rectal ulcer and ulcerations in the anal canal and biopsies demonstrated active inflammation. A rectal swab was positive for C. trachomatis. The patient was prescribed a 21 day course of doxycycline and his rectal pain and bleeding quickly improved. **Case 2:** 55 year old man with history of gastric adenocarcinoma had anterior rectal wall thickening noted on routine CT surveillance. He was asymptomatic. Flexible sigmoidoscopy showed erythema in the rectal wall with a single small ulcer. Biopsy showed reactive inflammatory changes. Following the procedure he noted episodes of hematochezia and endorsed receptive anal intercourse prompting testing with rectal swab which confirmed C. trachomatis. He was treated with doxycycline.
Discussion: Individuals at risk of rectal C. trachomatis are often not screened in extragenital sites, possibly due to lack of awareness, which leads to higher disease incidence. Patients' presentations can vary, and symptoms can mimic other processes like NSAID use, solidary ulcer syndrome, or malignancy. Doxycyline is the preferred treatment due to azithromycin having treatment failure rates as high as 22% due to low rectal penetration and antimicrobial resistance. Giving the rising prevalence, it is imperative that the diagnosis of rectal chlamydia be considered in sexually active patients or patients with proctitis symptoms. Routine screening should be considered to help identify asymptomatic infections early and to combat the spread of this disease.

S2103

Prostate Cancer With Colonic Metastasis: A Rare Case Report

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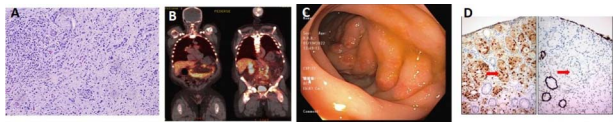
Introduction: Prostate cancer poses a high risk of metastasis. The most common metastatic site is the axial skeleton. Rarely this disease metastasizes to the gastrointestinal tract and is unusual in the colon. Here, we are reporting a rare case of prostate cancer with metastasis to the colon.
Case Description/Methods: A-61-year-old male presented with bladder outflow obstruction. Physical exam with digital rectal exam was significant for nodular prostate. Work-up revealed elevated PSA to 1250. Biopsy confirmed the diagnosis of prostate adenocarcinoma and a Gleason score of 4-5 (Figure A). Staging with positron emission tomography (PET) scan showed retroperitoneal adenopathy and diffuse bone metastasis (Figure B). Genetic testing showed no actionable alterations. The patient was initially treated with ADT and Taxotere chemotherapy based on high Volume disease (CHAARTED trial). He had a very good clinical and biochemical response (PSA decreased from 1250 to 180). Unfortunately, he progressed after 5 cycles with an increase in his PSA. He was started on second-generation Enzalutamide. He continued to respond for 15 months with his PSA decreasing to 9. He underwent a screening colonoscopy which revealed a 5 cm mass in the rectosigmoid (Figure C). Biopsy and immunohistochemistry surprisingly revealed metastatic adenocarcinoma of prostate origin (Figure D). The case was discussed in our multidisciplinary tumor board and is currently on Cabazitaxel as per NCCN guidelines. The treatment is currently in process.
Discussion: Only a few cases have been described in the medical literature with colon metastasis from prostate cancer. It is extremely rare as most of the colonic involvement of this disease is driven by local invasion. The metastatic pattern of advanced prostate cancer is well known with bone tissue being the most dominant site for metastasis. Other sites of involvement are lymph nodes, liver, thorax, brain, and kidneys. The literature review has revealed most of the GI tract involvement of this disease is likely to be hormone-refractory and asymptomatic as in our patient. Our patient did not have any GI-related symptoms to the colon mass and was discovered in screening colonoscopy. The patient is currently receiving chemotherapy as per NCCN guidelines and this treatment approach has resulted in a decrease in his PSA level and disease stability. It is imperative for oncologists, gastroenterologists, and urologists to consider the possibility of prostate carcinoma metastasizing to the gastrointestinal tract.



[2103] **Figure 1.** A, Prostatic adenocarcinoma. Tumor cells are ranged in poorly formed glands (left upper portion) with Gleason score of 4 as well as diffusely infiltrating pattern (right portion) with Gleason score of 5. B, Intense activity throughout the skeleton, and retroperitoneal and left pelvic hypermetabolic lymph nodes compatible with metastases. C, A 5 cm mass-like lesion was located in the rectosigmoidat 15-20 cm from the anal verge. D, On immunohistochemical stains, the neoplastic cells (arrow) are positive for NKX3.1 (prostatic marker, left panel) and negative for CDX2 (colonic marker, right panel). The features confirm cvarcinoma of prostatic origin.

S2104

Rectal Adenocarcinoma Presenting as a Perirectal Abscess

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Introduction: Colorectal cancer (CRC) is the third leading cause of cancer-related mortality. Despite excellent screening efforts resulting in the decrease of the overall incidence and mortality rate of CRC, the incidence is rising among younger adults. Rectal cancer (RC), specifically, disproportionately affects this younger population. Classic symptoms of RC such as hematochezia, tenesmus, rectal pain, and bowel habit changes are well known but can be non-specific and misdiagnosed. Rare presentations in combination with these conventional symptoms can occur warranting a higher degree of clinical suspicion. Here we report a case of rectal adenocarcinoma (RA) presenting as a perirectal abscess.
Case Description/Methods: A 52-year-old male with uncontrolled type 2 diabetes presented with a 5-day history of fatigue, subjective fever as well as swelling and cramping pain around the left buttocks. In addition to weight loss, he reported a 2-2.5 year and 2-month history of rectal bleeding and changes in bowel habits, respectively, which were attributed to other conditions including hemorrhoids and IBS. He had never undergone a colonoscopy. On exam, the patient was afebrile (36.1°C), tachycardic (110 bpm), hypotensive (83/55 mmHg), and tachypneic (20 breaths/min). His left buttock was swollen, indurated, and tender on palpation but there was no gross fluctuance or crepitus. WBC count (33.6 $\times$ 10^9/L), and lactate (4.2 mmol/L) were elevated suggesting severe sepsis. CT abdomen/pelvis and examination in the OR for suspected, and subsequently confirmed, Fournier's gangrene and perirectal abscess led to the discovery of a RA (final: pT4N0M0, stage IIB/C). Management included surgical debridements, antibiotic therapy, neoadjuvant chemoradiation, and abdominoperineal resection. He remains in remission with a stable CEA level and unremarkable follow-up colonoscopies.
Discussion: While uncommon, RC disproportionately affects younger patients where the annual incidence has increased by 2.1% in this group. The conventional presentation of RC may be attributed to a different condition, especially in younger patients, delaying diagnostic colonoscopy and treatment. In the literature, 4 cases of RA presenting as perirectal abscess in adults have been described where 2 patients were 45 years old or younger. In all cases, the perirectal abscess was diagnosed before or concurrently with the RA. Taken together, perirectal abscess, especially if present in conjunction with classic RC symptomology, may necessitate the workup of RC.

S2105

Rectal Foreign Body Necessitating Surgical Intervention

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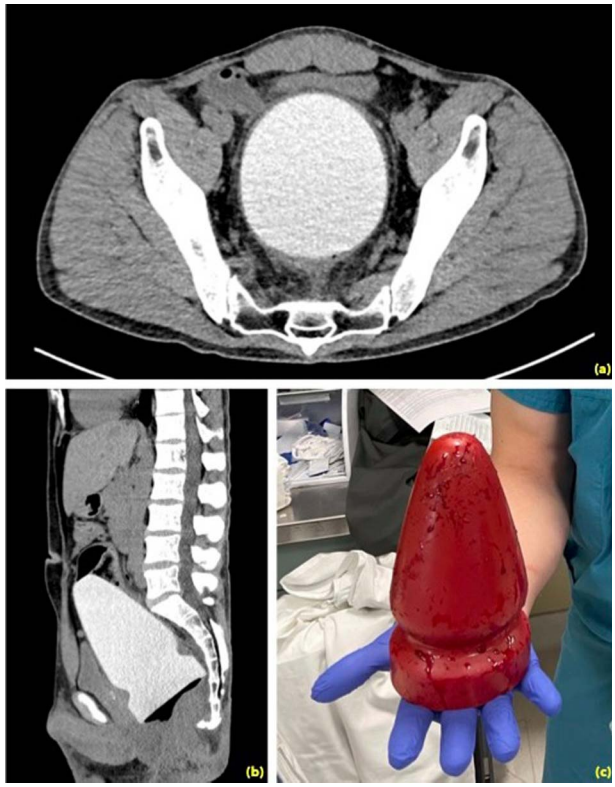
Introduction: Rectal foreign bodies (RFB) present a unique management dilemma due to the variety of objects transanally impacted and their subsequent range of local trauma. A reluctance to seek medical assistance and present a candid recount of the incident can make diagnosis challenging and pose delays, further worsening the degree of injury before timely intervention can be provided. Consequently, our case aims to illustrate a systematic approach to the diagnosis and management of irretrievable rectal foreign bodies.
Case Description/Methods: The case illustrates a 45-year-old gentleman who presented to the ER with severe rectal pain. He reported that earlier in the day, he had felt adventurous and had self-inserted a rubber sex toy into his rectum. He had been unsuccessful in removing the toy despite multiple efforts and explained that, as time passed, he experienced worsening rectal pain with mild bleeding at the insertion site. Upon confirmation of a large palpable foreign body on the rectal exam, a computed tomography of the abdomen/pelvis showed a large triangular radiopaque foreign body within the rectum measuring 8.8 $\times$ 9.4 $\times$ 17.0 cm along with severe rectal wall thickening. The patient was immediately taken to the operating room where multiple attempts to transanally remove the impacted object were unsuccessful. This ultimately necessitated an exploratory laparotomy and colotomy with subsequent partial colectomy. An end colostomy was matured after field contamination from the spillage of colonic contents during the extraction of the foreign object (Figure).
Discussion: Rectal foreign bodies continue to be a clinical challenge with their increasing incidence. Although there is a predominance of RFBs in males, it is important to keep an impartial perspective. Notably, it is crucial to understand that RFBs are not limited to sexual satisfaction - but instead could be used for non-sexual purposes (ie, packing of illicit drugs). Consequently, all RFBs need to be regarded as potentially hazardous. The presented case highlights the importance of a systematic approach which includes ruling out peritoneal signs via physical exam and imaging for potential evidence of perforation. Thereafter, it is important to attempt a manual and transanal removal of the RFB. If all approaches are unsuccessful, surgery via laparoscopy will be necessary. During surgery, the object can be "milked" toward the rectum to be removed transanally. If unsuccessful, however, a colotomy is imperative as illustrated in the presented case.



[2105] **Figure 1.** (a) CT Abdomen/Pelvis transverse view showing displaced anterior urinary bladder secondary to mass effect from the large rectal foreign body (b) Sagittal view of radiopaque foreign body within the rectum measuring 8.8 $\times$ 9.4 $\times$ 17.0 cm in greatest TV/AP/CC dimensions (c) Post-surgical removal after unsuccessful transanal extraction.

S2106

Primary Small Cell Carcinoma: A Most Unusual and Disturbing Colonoscopy Finding

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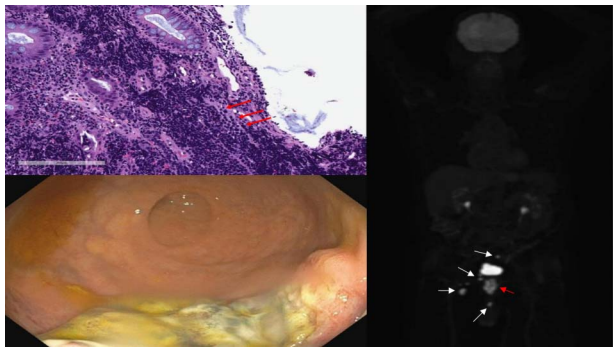
Introduction: Generally of pulmonary origin, small cell cancer is a locoregionally aggressive malignancy that can infrequently arise from the integumentary, upper respiratory, genitourinary, lymphatic, and gastrointestinal tracts. Rectal SCC (RSCC) is particularly rare, accounting for < 0.2% of large bowel cancer. Prognosis is dismal with a median survival of 6-12 months. Here we present a case of RSCC presenting as a rectal ulcer in a patient evaluated for hematochezia.
Case Description/Methods: A 75-year-old male with atrial fibrillation on rivaroxaban and a remote history of prostate cancer status-post radiotherapy presented with 24 hours of hematochezia, rectal tenesmus, and diarrhea, but denied weight loss or abdominal pain. Hemoglobin trended from a baseline of 13.5 g/dL 5 months earlier to 11.9 g/dL upon presentation. Diagnostic colonoscopy revealed a firm 3 cm ulcerative rectal mass with heaped borders and friability 2 cm from the anal verge. Pelvic MRI showed the mass abutting the prostate without evidence of extension into adjacent tissues. Brain MRI was negative for intracranial metastasis, and whole-body PET CT showed abnormal uptake in the perirectal, posterior pelvic, right and left inguinal lymph nodes without intrathoracic uptake. Histopathological analysis revealed RSCC with strong CD56 expression, weak expression of synaptophysin and chromogranin, and absent CD45 expression. FNA of the right inguinal lymph node confirmed lymphatic spread, establishing a final staging of T3a-T4bN2aM0 (group IIIC). Given his history of prostate radiation, he was not a candidate for further radiotherapy. He was induced on etoposide/carboplatin and is being considered for either abdominoperineal resection or pelvic exenteration (Figure).
Discussion: Colorectal cancer (CRC) is relatively common, with 151,030 new cases of large bowel cancer diagnosed annually in the United States, with 52,580 deaths per year. RSCC is often metastatic, portending a poor prognosis. Primary RSCC is particularly rare, though radiotherapy and chemotherapy can be an effective in neoadjuvant, adjuvant, and palliative contexts when combined with surgery. Though radiotherapy significantly increases survival in RSCC, our patient's close tumor proximity to his prostate cancer radiotherapy site precluded further radiotherapy. Overall, the prognosis for RSCC remains dismal, with mean relapse of 1 year, even in treated patients. Although rare, our case highlights how RSCC should remain on the differential for both CRC and hematochezia.



[2106] **Figure 1.** Top Left: Rectal mass biopsy under hematoxylin-eosin stain shows dense clusters of oval or round cells (red arrows) with round or oval nuclei, high nuclear/cytoplasmic ratios, prominent mitoses, and conspicuous necrosis that are characteristic of small cell cancer. Bottom Left: Colonoscopy image of a large, ulcerative, friable rectal mass with heaped up borders unlike the typical appearance of adenocarcinoma, which more often presents with a polypoid mass or obstructing lesion. Right: PET-CT slice showing significant radiotracer uptake at site of large rectal mass on colonoscopy (red arrow) and numerous perirectal, posterior pelvic, and inguinal lymph nodes (white arrows).

S2107

Prepare for the Unexpected: Three Rare Cases of Pneumatosis Cystoides Intestinalis on Screening Colonoscopy

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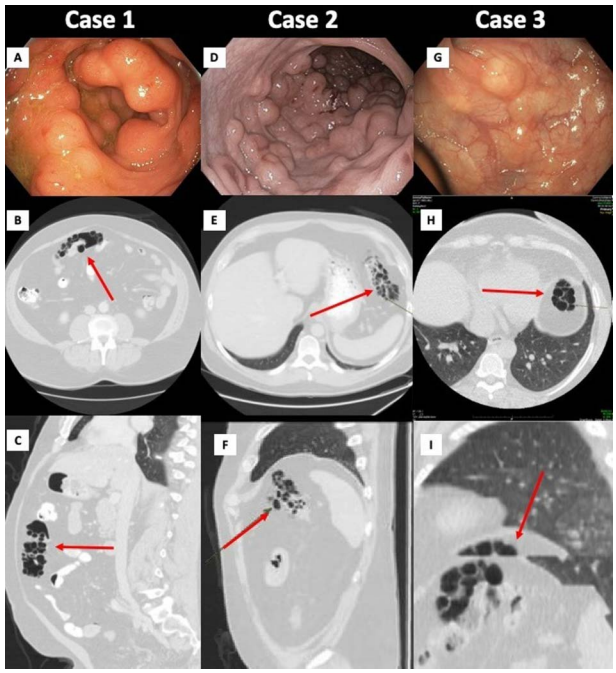
Introduction: Pneumatosis cytosides intestinalis (PCI) is a condition in which gas is present within the extraluminal space of the bowel wall. PCI is often a clinical sign that is most commonly seen on abdominal Computed Tomography (CT) imaging but can also be visualized on colonoscopy leading to the diagnosis of multiple benign to life threatening conditions. We present 3 cases of patients who were found to have benign PCI on screening colonoscopy.
Case Description/Methods: Three patients presented for screening colonoscopy. Each patient was asymptomatic and had no significant family or personal history of colon cancer. In each endoscopic case, the cecum was reached and appeared normal. The first patient was a 59-year-old male with history of irritable bowel syndrome. During colonoscopy, 2 adenomatous-appearing polyps were removed but an area of nodularity was also seen originating in the sigmoid submucosa located 30 to 35 cm from the anus. Similarly, the second patient was a 45-year-old male with history of GERD and HTN whose colonoscopy also revealed large submucosal nodular lesions in the descending colon 50 to 65 cm from the anal verge. Biopsies taken during this colonoscopy resulted back as fragments of superficial colonic mucosa with marked edema, crypt architectural distortion, and reactive changes. Deeper levels also revealed possible submucosa leiomyoma and smooth muscle hyperplasia. In both cases, follow up CT demonstrated several locules of air surrounding the colonic mucosa along with colonic wall thickening. The third patient was a 47-year-old female with history of hyperlipidemia who had air filled cysts within the splenic flexure on colonoscopy that were ruptured with a needle. Review of the patient's prior CT revealed several intramural locules of air in the splenic flexure, in keeping with pneumatosis cystoides intestinalis. For each of these patients, the CT findings were consistent with benign PCI with no evidence of obstruction or acute inflammatory changes and thus required no additional workup (Figure).
Discussion: It is estimated that approximately 0.03% of the population has PCI but this is likely an underestimate as PCI is often asymptomatic. When this abnormality is seen on colonoscopy, careful consideration for urgent abdominal imaging should be undertaken if a patient is having symptoms suggestive of bowel ischemia. In the 15% of cases in which no apparent cause is found, cases are considered benign and can be managed conservatively.



[2107] **Figure 1.** (A) Case 1 colonoscopy revealing a large area of abnormal nodular mucosa in the sigmoid colon located approximately 35 to 30 cm from the anus and originating in the submucosa. (B and C) Follow up CT demonstrating a focal area of sigmoid colonic pneumatosis along with an adjacent focus of mesenteric venous gas. (D) Case 2 colonoscopy with submucosal nodular lesions in the descending colon 50 to 65 cm from the anal verge. (E and F) Follow up CT with several locules of air surrounding the colonic mucosa along with colonic wall thickening. (G) Case 3 with air fluid cysts on colonoscopy. (H and I) Prior CT coronary calcium screening incidentally noting Pneumatosis cytosides intestinalis.

S2108

Rare Inflammatory Granulation Polyp Inside a Diverticulum

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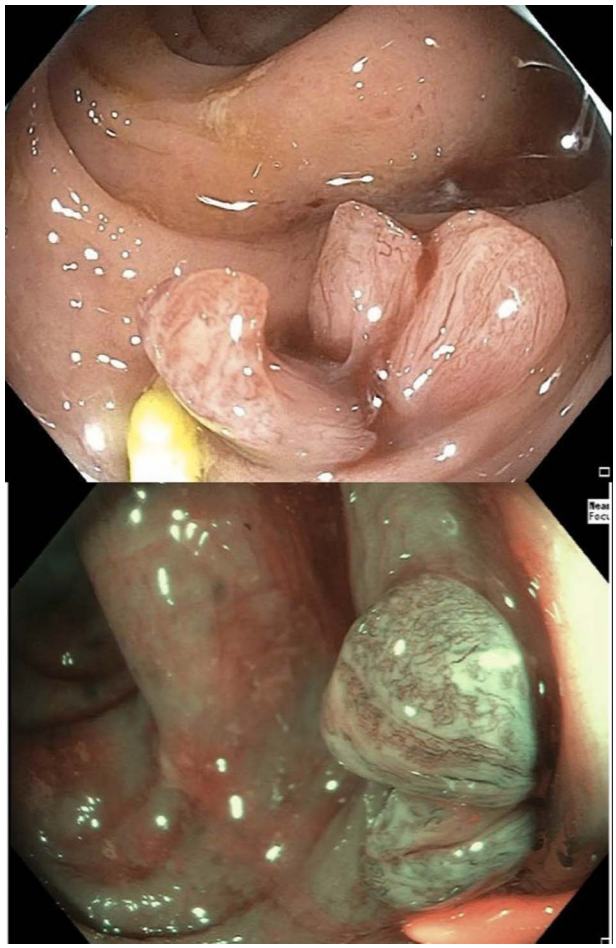
Introduction: Inflammatory granulation polyps arising from a diverticulum are rarely reported in literature. They are typically observed in the setting of recurrent inflammation such as inflammatory bowel disease (IBD) or diverticulitis. They are difficult to distinguish from malignancy as these lesions are usually friable and occasionally covered in exudates. Endoscopic management can be technically challenging and often associated with increased risk of perforation and bleeding. We present a case of inflammatory granulation polyp arising from a diverticulum which was removed endoscopically.
Case Description/Methods: 47-year-old Spanish-speaking female with a past medical history of obesity and hyperlipidemia was referred to us for evaluation of ongoing abdominal pain and acid reflux. Labs were notable for a hemoglobin of 12.3 g/dL. She had no prior history of endoscopy. Computed tomography of the abdomen and pelvis with contrast was normal. She subsequently underwent upper endoscopy and screening colonoscopy. Colonoscopy showed diverticulosis and a 7 mm polyp arising from the diverticulum in the sigmoid colon. An attempt was made to lift the polyp through submucosal injection with ORISETM gel but only minimal lifting effect was observed. Polypectomy was subsequently performed with cold biopsy forceps. Pathology was consistent with edematous granulation tissue (Figure).
Discussion: Inflammatory granulation polyps are rarely encountered on colonoscopy and owing to it closely mimicking colon neoplasm endoscopists should be able to differentiate between the 2. Granulation polyps have irregular vessels on the surface along with absence of pit patterns. Removal of these polyps when arising from the diverticulum involves endoscopic mucosal resection and closing of the site using clips or sutures to prevent complications. When associated with diverticulitis these are benign polyps and hence could be approached with possible surveillance.



[2108] **Figure 1.** Top: Colonoscopy demonstrating a granulation polyp inside of a diverticulum in the sigmoid colon. Bottom: Narrow band imaging magnified irregular micro-vessels on the surface of the sigmoid colon polyp.

S2109

Posterior Solitary Rectal Ulcer Syndrome

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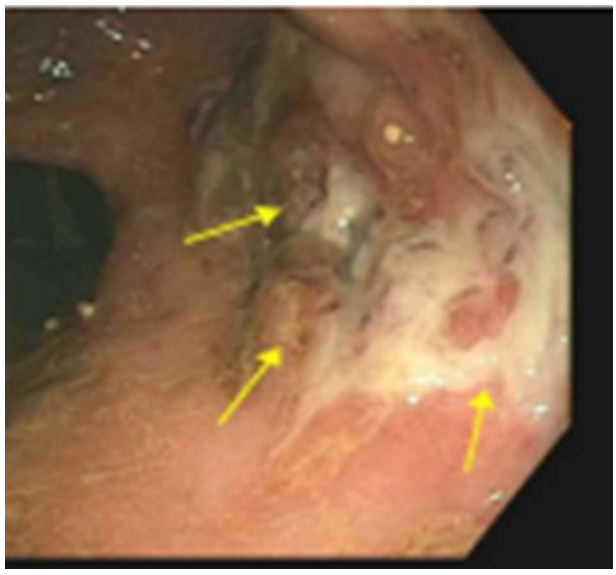
Introduction: Solitary rectal ulcer syndrome (SRUS) is a rare colorectal disorder that presents as bright red blood per rectum (BRBPR), rectal pain, straining, incomplete evacuation, and rectal prolapse. The incidence of SRUS is 1: 100,000 individuals per year. SRUS is a misnomer as it can present as multiple ulcers and polypoid lesions. Differential diagnoses include inflammatory bowel disease (IBD), ischemic colitis, pseudomembranous colitis, and malignancy. Ergo, histopathological evaluation is necessary for differentiation. Typically, these lesions occur on the anterior surface of the rectum given the movement of the muscles in the rectum. In our case, we present a patient who has a posterior SRUS which was misdiagnosed as Crohn's disease.
Case Description/Methods: 45-y.o. heterosexual male with PMH of presumed Crohn's and diverticulosis presented to ED multiple times with recurrent complaints of BRBPR & abdominal pain intermittently over 18 years. Imaging showed rectal wall thickening & inflammation (Figure 1). Patient underwent multiple sigmoidoscopies and colonoscopies showing a single ulcer in the posterior with stigmata of bleeding. Multiple clips and hemostatic therapies were applied. Repeat biopsy results showed chronic ulceration with reactive rectal epithelium; all negative for dysplasia/malignancy and no evidence of IBD. Patient was treated conservatively with mesalamine enemas, steroids, & laxatives. Defacogram was normal. Given repeated episodes of bleeding despite this, colorectal surgery performed a laparoscopic low anterior resection of the ulcer.
Discussion: The pathogenesis behind SRUS is poorly understood but thought to be a result of rectal prolapse and rectal trauma by 2 different mechanisms. (1) Prolapsed rectal mucosa forced downward due to the pressures generated by the rectum during defecation, while opposing forces of the paradoxical contraction of the puborectalis muscle tendon cause high pressures within the rectum, leading to mucosal ischemia, and predisposing to ulceration. (2) Contraction of the puborectalis muscle result in shear forces on the rectal mucosa. Treatment is biofeedback therapy and topical therapies. Surgery is a last resort. A postero-lateral rectal ulcer is atypical unlike the usual anterior ulcers. Our patient was noted to have an exaggerated cul-de-sac along with a partially prolapsed anterior wall of rectum. Post op, he is doing well without any clinical symptoms.



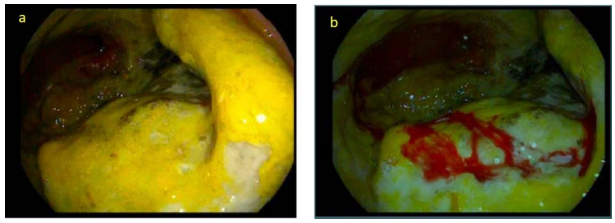
[2109] **Figure 1.** Posterior SRUS.

S2110

Primary Colonic B-Cell Lymphoma in a Young Patient

Hassan Zreik, MD, Parth M. Patel, MD, Sruthi Ramanan, MD, Harjinder Singh, MD, Shamik Parikh, MD, Merritt Bern, MD.
Henry Ford Jackson, Jackson, MI.

Introduction: The development of extranodal NHL can be a diagnostic challenge despite the fact that 30% of the cases are extranodal and involve the gastrointestinal tract. The incidence of a primary colonic lymphoma is rare, especially in young patients.
Case Description/Methods: A 21-year-old man initially presented to our emergency department (ED) with abdominal pain, weakness, rectal bleeding, and anemia. Two months prior to this admission, he presented to an ED in Colorado with rectal bleeding and abdominal pain. He was diagnosed with gastroenteritis and discharged with antibiotics. He was evaluated in Ohio for syncope and profound anemia (hemoglobin of 4.2) 2 weeks later. A CT scan of the abdomen and pelvis demonstrated right colon wall thickening. He was diagnosed with inflammatory bowel disease and discharged on prednisone. At this presentation, he reported a 15-pound weight loss and CT imaging demonstrated significant right colon wall thickening with a 19 cm "mass-like" lesion. A subsequent colonoscopy showed a large, ulcerated, partially obstructing right colon mass consistent with malignancy. Histology demonstrated a high-grade B-cell lymphoma that was CD20 positive by immunohistochemical staining. Unfortunately, the patient was discharged from our facility at his request before definitive therapy could be undertaken. Two weeks later, he presented to a different ED with bloody diarrhea, abdominal pain, and vomiting and was found to have perforation of the cecum with free air. He underwent an exploratory laparotomy with a stormy postoperative course and eventually died from post-surgical complications (Figure).
Discussion: Although a primary colonic lymphoma is exceedingly rare, especially in the young population, this case is instructive as it is common to overlook malignancy in the young that presents with gastrointestinal symptoms. The patient was seen in 2 separate hospitals and treated symptomatically even when he presented with profound anemia (hemoglobin of 4) and an abnormal CT scan of the right colon. Presentation of the disease can vary, however, should be considered and recognized in younger patients to avoid delays in proper management, which could lead to severe complications, as illustrated by this case. Given its rarity, no large trials have been conducted to evaluate optimal treatment.



[2110] **Figure 1.** An ulcerated partially obstructing large mass in the ascending colon. The mass was circumferential, measured 10 cm in length and 10 cm in diameter. Oozing was present.

S2111

Proctitis in a Young Male Secondary to Hydrogen Peroxide Enema

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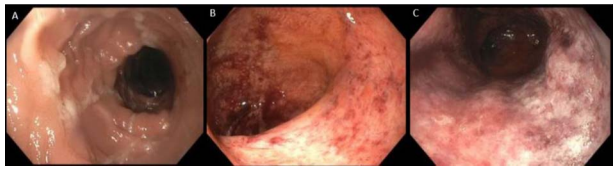
Introduction: Hydrogen peroxide was used for the management of meconium ileum and fecal impaction, and it was often used as a home remedy for constipation. Its use has now been abandoned due to harmful effects such as hydrogen peroxide-induced colitis, stricture, or perforation as an enema. We present a case of hydrogen peroxide-induced proctitis in a young male. Chemical-induced proctitis can mimic presentation of other conditions such as ulcerative colitis, pseudomembranous colitis, and ischemic colitis. Therefore, it signifies the importance of obtaining careful, pertinent history to make an accurate diagnosis in patients with unexplained proctitis.
Case Description/Methods: A 30-year-old male with no significant past medical history presented with hematochezia and loose stool for 3 days. The patient was in his usual state until he used hydrogen peroxide enema with unknown concentration for constipation and he had anal intercourse afterwards. He started to experience multiple episodes of hematochezia, associated with tenesmus and loose stool in the following 2-3 days. The bleeding was associated with suprapubic and LLQ deep pain but no perianal pain. In the emergency room, vitals were stable, and CT showed proctitis and distal sigmoid colitis. He denied any similar symptoms in the past. He denied history for sexually transmitted diseases, perianal itching, discharge, perianal abscess, or fistula. He denied history of arthritis, skin rash or oral ulcers. Patient underwent sigmoidoscopy which showed severe, diffuse colitis seen in the distal rectosigmoid and in the rectum. Histopathological examination showed polypoid colonic mucosa with hyperplastic changes. Patient had clinical improvement with mesalamine enema (Figure).
Discussion: It's unclear if anal intercourse after the administration of hydrogen peroxide is linked to pathogenesis of proctitis in this case. Clinical manifestations of hydrogen peroxide-induced proctitis range from self-limited colitis to strictures and perforation, which can lead to other serious complications. The pathogenesis is mainly from corrosive damage, secondary to penetration of the chemical with subsequent

formation of oxygen. Most patients recover with conservative therapy. Endoscopic and CT findings of hydrogen peroxide-induced colitis can mimic pseudomembranous colitis, ulcerative colitis, and ischemic colitis, and therefore obtaining detailed, pertinent history is critical to make an accurate diagnosis.



[2111] **Figure 1.** Endoscopic findings showing erythematous, friable mucosa in sigmoid colon and rectum. (A) normal, distal descending (B) sigmoid colon (C) rectum.

S2112

Receptive Anal Intercourse in IBD Patients: Impact on Treatment of Anorectal Disease

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Introduction: Receptive anal intercourse (RAI) is a common practice both among men and women. For patients with medically refractory ulcerative colitis (UC) or UC with dysplasia who practice RAI,, it has been cited anecdotally as a reason not to pursue IPAA surgery. There remains a lack of formal studies investigating the true extent of and impact of RAI on IBD patients who have anorectal disease.
Case Description/Methods: A 40-year-old man with a 15-year history of pancolonic UC presented with worsening abdominal pain and hematochezia. Flexible sigmoidoscopy revealed Mayo 3 inflammation. Stool infectious studies were negative and he was started on 40 mg of prednisone tapered over 8 weeks. Due to a history of treatment failure with infliximab, vedolizumab was started as an outpatient. He had clinical response but his symptoms worsened when prednisone was decreased below 20 mg. Despite 2 consultative visits with colorectal surgery, he refused an elective total colectomy with IPAA. He presented a year later with a UC flare despite being on continuous prednisone. After a week of intravenous steroids, inpatient flexible sigmoidoscopy still showed Mayo 3 inflammation. Urgent colectomy with IPAA was recommended. Despite being known to our health system for over one year, he admitted to regularly practicing RAI for the first time and state that was the reason he declined IPAA surgery. Biopsies from his flexible sigmoidoscopy revealed CMV infection, and he has treated with valacyclovir. His symptoms eventually remitted and he was successfully weaned off prednisone. He continues to be on maintenance vedolizumab.
Discussion: Our case presents several major challenges in caring for IBD patients who practice RAI. Due to the social stigma associated with it, some patients may be reluctant to discuss with their providers how RAI impacts their overall health. In some instances, the patients instead rely on non-medical sources of information. There is lack of consensus in the surgical literature and anecdotally on whether RAI is permissible after IPAA surgery. Conceivably, a hand-sewn anastomosis may be the technique of choice compared to stapled anastomosis to allow for continued RAI practice after IPAA surgery. Additional considerations and discussion may be needed when deciding the pouch length. Overall, IBD patients who practice RAI represent an under-studied population with likely specialized medical and surgical needs.

S2113

Rare Case of PEG-Based Bowel Prep Severe Allergic Reaction

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Medstar Shah Medical Group, Waldorf, MD.

Introduction: Bowel preps are commonly Polyethylene Glycol (PEG)-based and allergic reactions are rare and not commonly severe. Its chemical formula allows for it to be soluble in water with minimal gastrointestinal absorption, which increases water retention in the colon. This component's wide scale adoption is due to the ability to be manufactured with varying tonicities, typically isotonic and hypotonic. In rare cases patients may be allergic to these chemicals, and lead to severe symptoms such as dyspnea, facial flushing, urticaria, and vomiting. We present a rare case of recurrent severe allergic reaction to PEG-based bowel preparations.
Case Description/Methods: An asymptomatic 60-year-old White man presented for colon cancer screening and intermittent GI bleeding. A PEG-based pill preparation was prescribed to the patient for his colonoscopy. Shortly after initiating his prep, he complained of difficulty tolerating the prep and developed generalized pruritus and urticaria. He was advised to stop the bowel prep immediately and subsequently responded with conservative treatment with oral Diphenhydramine. In light of this adverse reaction, he was prescribed an alternative PEG-based liquid prep, however, the same allergic reaction occurred shortly after initiating the preparation. A decision was thus made to use a non-PEG based bowel prep on his third attempt. The patient was able to tolerate the prescribed prep without incident and did not have any of the previous symptoms. As a result, the patient was able to complete his colonoscopy successfully.
Discussion: Severe allergic reactions to Polyethylene Glycol (PEG)-based bowel preparations are quite rare and can be associated with symptoms such as dyspnea, facial flushing, urticaria, and vomiting. Due to the common use of such preps, such adverse reactions can not only be clinically concerning but also inconvenient as multiple similar preparations may be tried, as in the case of our patient. In light of this, alternative non-PEG based bowel preps should be considered if a severe reaction or anaphylaxis is seen with an initial PEG-based preparation. Non-PEG based bowel preps such as saline-based preps can provide an effective alternative for such patients. Gastroenterologists should be aware of this rare, yet potentially high risk adverse reaction to PEG-based preparations and consider an alternative non-PEG based preparation as a first-line option after initial adverse reaction to mitigate potential recurrent risk.

S2114

Rare Presentation of GI Involvement With Disseminated Histoplasmosis and CMV

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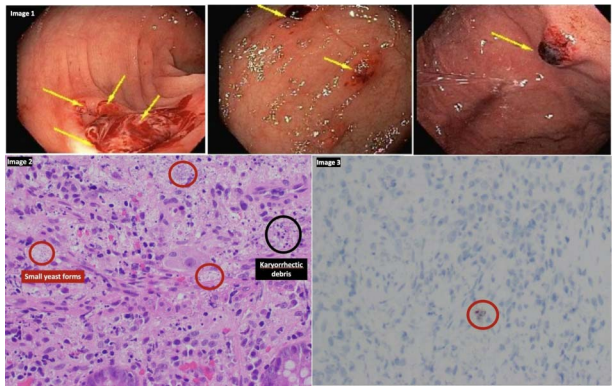
Introduction: Histoplasmosis is primarily a respiratory disease but can progress to systemic disease in certain populations. Severe disseminated histoplasmosis (DH) can present in immunosuppressed patients as shock and multi-organ system failure. GI histoplasmosis is common in patients with DH, present in about 50-70% of patients however only detected in 3-12%. Co-infection with opportunistic bugs occurs in up to 51% of patients with DH. We present a case of an immunocompromised patient with a history of HIV/AIDS who developed septic and hemorrhagic shock secondary to DH and CMV with GI involvement.
Case Description/Methods: Patient was a 40-year-old male with a past medical history of untreated HIV/AIDS and homelessness who was found unresponsive. On presentation, the patient was hemodynamically stable with pertinent labs shown in Table. CT A/P revealed retroperitoneal lymphadenopathy and splenomegaly, and chest x-ray had clear lung fields. Lumbar puncture revealed low glucose and a WBC count of 4. In addition to broad-spectrum antibiotics and acyclovir, amphotericin B was initiated. Clarithromycin and ethambutol were started due to concern for progressive cytopenia secondary to MAC infection. Patient's status continued to deteriorate, requiring vasopressors. On day 4 of admission, the patient was noted to have hematochezia with a drop in hemoglobin below 7. Endoscopies revealed several lesions that were cultured and biopsied (Image 1). Disease was diffuse and not amenable to endoscopic therapy. The patient was unstable for surgical intervention. Hematochezia persisted, the patient continued to deteriorate despite aggressive supportive therapies. GI pathology had morphology consistent with histoplasmosis in duodenum, cecum, and colon (Image 2), as well as a positive CMV stain in the cecum (Image 3). Urine histoplasmosis antigen was positive. Ultimately, the patient was transitioned to hospice and died shortly after.
Discussion: This patient had 2 rare presentations, isolated GI histoplasmosis and co-infection with CMV, which is rarely described, with about 5 case reports written up until 2017. The patient was severely immunocompromised and warranted extensive infectious workup and initiation of broad spectrum antimicrobials. Despite appropriate treatment, the patient's condition worsened. This case emphasizes the high mortality associated with untreated opportunistic infections as well as the need to recognize rare GI manifestations of those infections in the setting of AIDS.

Table 1. Laboratory results from admission	
WBC	3.3
ALC	0.00
Hgb	9.4
Platelet	36
CD4 abs.	3
HIV RNA	5,390,000

WBC: White blood cell; ALC: Absolute lymphocyte count; Hgb: hemoglobin



[2114] **Figure 1.** Image 1: Bleeding ulcer with heaped up borders and oozing mucosal lesions Image 2: Small yeast forms. Image 3: Scattered CMV positivity.

S2115

Primary Diffuse Large B Cell Lymphoma of the Cecum

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Introduction: Extranodal lymphomas are found to commonly involve the gastrointestinal tract but cecal involvement is a rare manifestation of the disease state. Diffuse large B cell lymphoma is an aggressive type of Non-Hodgkins lymphoma that can arise at different stages of mature B cell differentiation due to mutations in the BCL-2 and BCL-6 genes.
Case Description/Methods: This is a case of a 78-year-old man with a history of hypertension and a previous Burkett's lymphoma in the third part of the duodenum which was successfully treated with chemotherapy 8 years prior. He presented with lower abdominal pain and constipation. A CT indicated a large cecal mass without evidence of metastasis. A subsequent colonoscopy revealed a large ulcerated cecal mass with the biopsies confirming a diffuse large B-cell lymphoma positive for CD10, CD43, BCL-6 and MUM-1. The biopsies were negative for CD5 and Cyclin-D1. He opted for treatment with chemotherapy instead of surgical resection. Oncology service initiated one cycle of Rituximab, Ifosfamide, Carboplatin and Etoposide and he was then switched to Monjuvi and Lenalidomide with excellent clinical response. Repeat CT/PET as well as a colonoscopy showed complete resolution of the mass and he has remained asymptomatic 12 months after completion of treatment without evidence of recurrent disease.
Discussion: Colonic involvement of lymphoma is rare and the gastrointestinal symptoms on presentation can be similar to other colonic malignancies, but the treatment rational is usually different involving chemotherapy as opposed to surgery as first line treatment. This case highlights the successful treatment of a patient who has shown continued remission after treatment of his cecal lymphoma and has now survived 2 different lymphomas of the gastrointestinal tract.

S2116

Pseudomembranous Colitis Presenting as Acute Colonic Obstruction in a Patient With Multiple Myeloma

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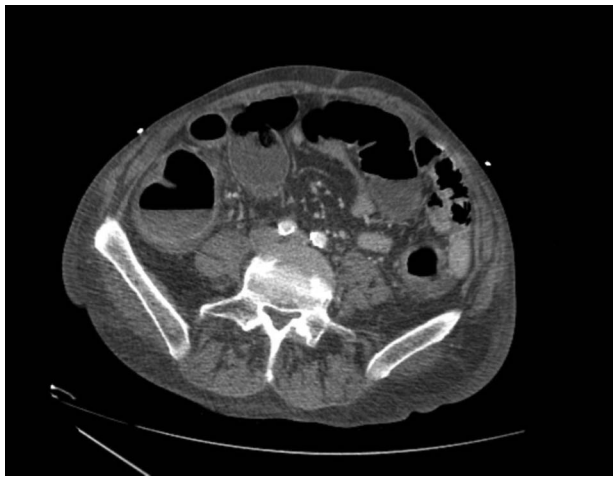
Introduction: The manifestations of pseudomembranous colitis (PMC) are usually in a hospitalized individual presenting with diarrhea and fever in the context of a clostridioides difficile infection (CDI). However, in this case we describe a Multiple Myeloma patient who presents with acute colonic obstruction as the first sign of PMC which appeared as an apple core lesion on computed tomography (CT scan).
Case Description/Methods: A 63-year-old male with past medical history significant for end stage renal disease, chronic hypotension, and multiple myeloma who presented to the emergency department complaining of 1 week of diarrhea and abdominal pain. He was hemodynamically unstable and was transferred to the intensive care unit. Lab work revealed normal leukocyte count, and hypokalemia. Computed tomography (CT) of the abdomen and pelvis displayed the development of a bowel obstruction secondary to stricture visualized at the proximal transverse colon, suspicious for primary colon cancer (Figure). Although he had normal lactic acid, there was a concern for ischemic colitis or toxic megacolon, he was taken to surgery and was found to have pseudomembranous colitis and friable membranes of his transverse colon that lead to the formation of apple core lesion on CT scan.
Discussion: PMC should be on the differential in patients with a baseline inflammatory state with CT findings suggesting apple core lesion or obstruction. Friable colon secondary to pseudomembranous colitis or ischemia could cause the intestines to collapse easily which may show an apple core lesion on CT scan.



[2116] **Figure 1.** Computed tomography of the abdomen and pelvis demonstrating apple core lesion.

S2117

Secondary Linitis Plastica of the Colon Due to Breast Cancer Metastasis Mimicking Inflammatory Bowel Disease

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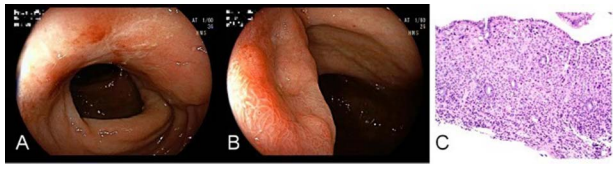
Introduction: Breast cancer is the second most common cancer in the US and the second leading cause of cancer related deaths. Breast cancer most commonly metastasizes to the bone, lung, liver, and brain, but rarely to the GI tract. We report a case of primary breast cancer with diffuse metastasis to the colon.
Case Description/Methods: 67-year-old female with history of collagenous colitis was diagnosed with stage IIIA (T3, N2, M0) invasive lobular carcinoma (ILC) ER+/PR+/Her2+ of the left breast identified on screening mammogram. She initially underwent neoadjuvant chemotherapy and anti-HER-2/neu therapy followed by left modified radical mastectomy with lymph nodes positive for metastasis 8 months after initiating therapy. She also completed radiation to left chest wall. Two years later, she underwent prophylactic contralateral mastectomy with incidental finding of right breast cancer with unknown stage ER+/PR−/Her2−. Three years after diagnosis, she had a colonoscopy for early satiety and abdominal discomfort. Prior colonoscopy 2.5 years ago only showed diverticulosis, however this colonoscopy revealed diffuse congestion, erythema, induration, and ulceration (A) with stenotic ileocecal valve (B) concerning for inflammatory bowel disease (IBD). Multiple polyps were found in the cecum, descending, sigmoid and distal rectum. Forceps biopsies of all colonic segments and polypectomies demonstrated poorly differentiated adenocarcinoma (C). Staining matched breast cancer primary (ER+, PR−, HER2−; CK7 and GATA3+). CT showed abdominal lymphadenopathy and osteoblastic metastatic disease. Treatment was switched from Exemestane to Xeloda and Zometa was started for bone metastasis. At 15 months of follow up, she is tolerating therapy well with radiographic resolution of metastatic disease (Figure).
Discussion: Breast cancer rarely metastasizes to the GI tract (4.5%), the stomach being most commonly affected. Lobular subtype is more frequently implicated than ductular. Colonic involvement is rare and can mimic primary colon cancer and IBD. The latency period between initial diagnosis of breast cancer and discovery of colonic metastasis is variable and can occur up to 30 years after. Patients may present with bowel obstruction, or non-specific symptoms such as abdominal pain, diarrhea, and weight loss. This case illustrates that breast cancer metastasis to the colon can present with symptoms mimicking IBD and rarely causes secondary linitis plastica, which to our knowledge has never been reported involving the entire colon.



[2117] **Figure 1.** Colonoscopy with congestion, erythema, and ulceration (A). Stenotic ileocecal valve (B). Biopsy from entire colon, rectum, and polyps consistent with glandular mucosa infiltrated by poorly differentiated adenocarcinoma. Staining was positive for ER+, PR−, HER2−; additional staining was positive for CK7 and GATA3+ which is consistent with breast primary.

S2118

Recurrent *Clostridioides difficile* Infections Caused by Topical Clindamycin

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Introduction: While there are many risk factors for *Clostridioides difficile* infection (CDI), they are often associated with the use of systemic antibiotics. However, it is possible to acquire this infection after the use of topical antibiotics due to low levels of systemic absorption. Here we describe a case of recurrent CDI after using topical clindamycin.
Case Description/Methods: A 56-year-old female with past medical history of acne vulgaris presented to clinic as a referral for recurrent *C. difficile* infection. The patient began experiencing frequent bouts of diarrhea associated with nausea, vomiting, and abdominal pain. She denied any recent travel, changes in her diet, or use of systemic antibiotics. However, she did report the use of topical clindamycin for facial acne. Stool testing was positive for *C. difficile*. The decision was made to treat with oral vancomycin for 10 days. However, the patient experienced recurrence of symptoms shortly after finishing treatment. She was eventually treated with multiple courses of pulse-tapered vancomycin. Eventually, the patient was referred for evaluation for fecal microbiota transplantation (FMT). She is now being evaluated for fecal microbiota transplant for recurrent CDI.
Discussion: The association between systemic antibiotics and CDI are widely known. However, topical antibiotics are generally not considered to be a risk for CDI. In our case, we have described a patient who developed recurrent CDI in the absence of risk factors aside from the use of topical clindamycin to treat her acne. There have been studies showing that topical clindamycin still has (up to 4-5%) systemic absorption, and this may have contributed to this patient's recurrent CDI. While cases of CDI following the use of topical antibiotics have been reported, literature regarding recurrent infections due to topical antibiotics remain scarce. As in the case of our patient, the absence of other risk factors raises the concern of how much topical antibiotics can be systemically absorbed, and how they may affect the gastrointestinal microbiota. Overall, topical antibiotics are considered relatively safe due to their limited systemic absorption. However, there remains a risk of developing CDI with some of these agents, and alternatives to topical clindamycin should be strongly considered in people at risk for CDI.

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1. Barza M, et al. Systemic absorption of clindamycin hydrochloride after topical application. J Am Acad Dermatol 1982;7:208-14.

S2119

Screening Colonoscopy Went Wrong: Follicular Lymphoma Presenting as Splenic Flexure Polyp—A Case Report

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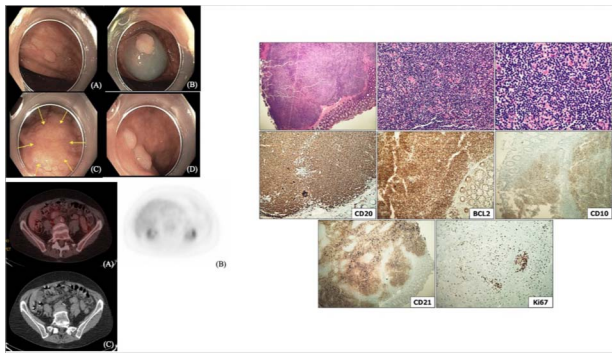
Introduction: Follicular lymphoma (FL) is a subtype of non-Hodgkin lymphoma (NHL) emerging from germinal focus of B cells. NHL usually arises in lymph nodes and affects liver, spleen, and bone marrow. The 3 most prevalent subtypes of (FLs) are mucosa-associated lymphoid tissue (MALT) lymphoma, extra-nodal marginal zone lymphoma, and diffuse large B-cell lymphoma, which accounts for approximately 40% of FLs outside lymph nodes. FL of the gastrointestinal tract is rare and accounts for less than 7% of all cases. Colorectal ones account for 1-2% of the cases.
Case Description/Methods: A 75-year-old female underwent first screening colonoscopy. Colonoscopy showed a flat irregular polyp near splenic flexure measuring 20 × 40 mm (Figure). Biopsy showed follicular lymphoma grade I. Other polyps were found in the proximal transverse colon and rectum. Pathology showed sessile serrated adenomas. Subsequently, the patient underwent PET/CT scan in order to estimate further lymphoma involvement. Imaging revealed no evidence of FL, nor increased colonic uptake. Due to the patient's resected lesion, no further chemotherapy is warranted at this time. Patient had surveillance colonoscopy 6 weeks later and post-polypectomy scars were biopsied and were negative for residual adenomatous changes. Active surveillance with colonoscopy to be performed in 1 year and PET scan every 6 months was recommended. Next generation sequencing cell free DNA (NGS) were negative for clinically significant variants.
Discussion: Pathophysiology of gastrointestinal FL includes clonal B-cell rearrangement as well as mutations in genes that modify chromatin (including CREBBP and KMT2D). In our case, tissue was positive for expression of CD-20, CD-3, CD-10, BCL-2, BCL-6 (faintly positive), CD-21, and CD-35, with negative CD-5 and cyclin D1, consistent with the common histological findings from similar patients with colonic FL. For patients with a low-tumor burden primary follicular lymphoma presenting without symptoms, there is relatively limited data regarding whether patients benefit from rituximab therapy versus observation. In our case, our patient underwent complete resection of distal transverse polyp, with negative extra nodal disease on PET/CT, she will benefit from observation at this time. Surveillance imaging is recommended no more frequently than every 6 months for the first 2 years following diagnosis, followed by no more frequent than annually after 2 years following diagnosis (Table).



[2119] **Figure 1.** [1.1] Colonoscopy images shows (A-B-D) Sessile polyps found in proximal transverse colon, rectum. C, Flat irregular polyp near the colonic splenic flexure measuring 20 × 40 mm. [1.2]: Distal transverse colon polyp, consistent with grade 1 follicular lymphoma. Immunostaining as evidenced above, demonstrating CD20 (lymphocyte positivity), BCL-2 (bright), CD10 (B cell positivity), CD21 (demonstrates parkedly expanded and disrupted follicular dendritic meshworks), and Ki-67 staining demonstrating low proliferation index (10-20%) in lymphoma cells, with high proliferation index (>90%) in the residual reactive germinal centers. [1.3]: (A) and (B) shows Axial PET scan sections with 2.2 uptake in the liver. There is no abnormal colonic uptake. Specifically, there is no uptake seen in the splenic flexure corresponding to the mass described on prior colonoscopy. (C) Computerized Tomography shows no mediastinal lymphadenopathy, no axillary lymphadenopathy. Liver and spleen not enlarged. Prominent left inguinal lymph node noted without evidence of abnormal FDG activity.

Table 1. Immunohistochemistry Antibodies results table

Antibody	Result
CD20	Most of the lymphocytes positive
CD3	Scattered small reactive T-lymphocytes, predominantly at the periphery of B-cell nodules
CD5	B-cells negative
CD10	B-cells positive
BCL-2	Positive
BCL-6	Many cells faintly positive
CD43	Weakly positive to negative.
Cyclin D1	Negative
CD21	FDC and many B-cells positive
CD35	FDC positive
Ki-67	10-20% in lymphoma cells; >90% in residual reactive germinal centers

S2120

Severe Hyper-Magnesemia Following Clenpiq Use in a Chronically Constipated Patient With Age-Appropriate Renal Function

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Introduction: Hypermagnesemia is a rare but recognized side effect of bowel preparation use that worsens with concurrent gastrointestinal motility dysfunction. Current consensus guidelines by the United Kingdom note that although Mg-containing bowel cleansers present a risk for hypermagnesemia in patients with stage 4 or 5 chronic kidney disease, they are acceptable for patients with early CKD (stages 1–3) and in patients with stage 5 CKD who are receiving hemodialysis. Herein, we report a case of severe symptomatic hypermagnesemia resulting from Clenpiq bowel preparation in an individual with age-appropriate renal function and chronic constipation.
Case Description/Methods: An 82-year-old female with a past medical history of chronic pancreatitis was brought by EMS for altered mental status after being found down in her bathroom at home. The patient was recently diagnosed with Barrett's esophagus and was scheduled for a surveillance endoscopy and colonoscopy as an outpatient and took Clenpiq bowel preparation the night before. On presentation, patient was found to be obtunded, hypothermic at 89.3°F, bradycardic at 45 beats/minute, and hypotensive at 73/47. Her laboratory findings were significant for a magnesium level greater than the quantifiable limit >9.6 mg/dL. Her creatinine was 0.87 mg/dL with a blood urea nitrogen of 16 mg/dL. CT scan of the abdomen and pelvis with contrast showed significant constipation. Initial treatment with intravenous furosemide to decrease serum magnesium level was unsuccessful. She subsequently underwent 2 rounds of intermittent hemodialysis along with an aggressive bowel regimen with improvement of symptoms and was ultimately discharged home at baseline function.

Discussion: In a post hoc analysis by Hookey et al evaluating the safety profile of ClenPiq, it was found to be associated with transient hypermagnesemia. Magnesium levels normalized in 24-48 hours and did not appear to be clinically significant. There have been no previously reported cases of a patient with age-appropriate renal function developing symptomatic hypermagnesemia requiring treatment after the use of the ClenPiq bowel preparation agent. While bowel preparations are typically safe and well-tolerated, one important consideration when selecting an agent is evaluating for co-existing GI disorders such as impaired motility. These can result in increased magnesium absorption and progress to symptomatic hypermagnesemia particularly in elderly patients.

S2121

Renal Cell Carcinoma With Rare Colon Metastasis

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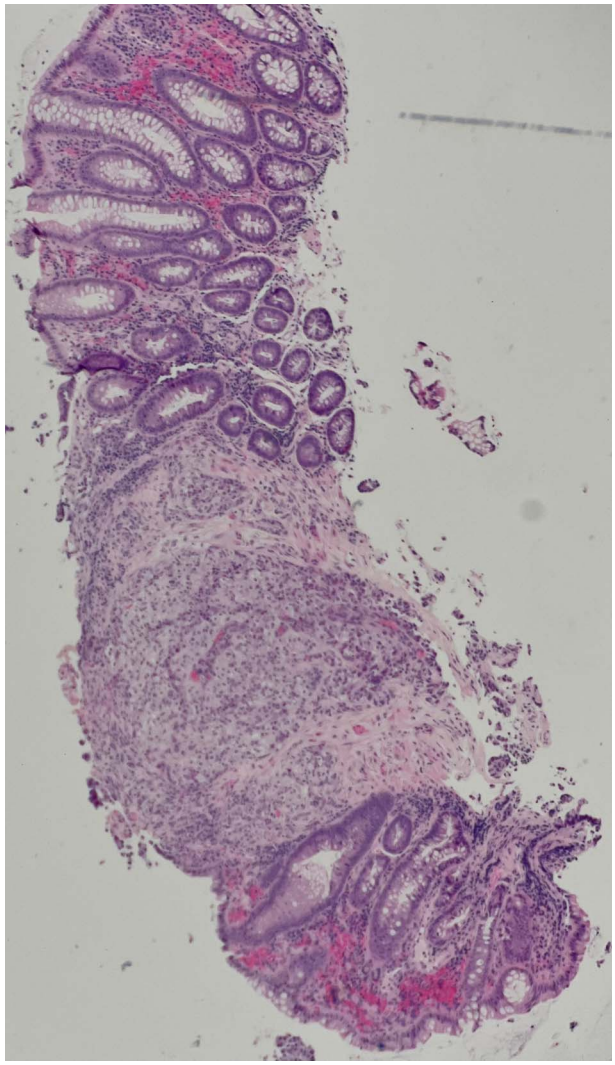
Introduction: RCC, a neoplasm originating in the renal cortex, constitutes 80-85% of primary renal neoplasms, and accounts for approximately 3% of all malignancies in adults. RCC carries a median survival rate of 8 to 31 months, although distant metastases at the time of diagnosis are associated with worse outcomes. Metastasis in RCC is seen in roughly 25% of all cases, and generally involves lungs, bones, liver, and brain. Although RCC has the potential to metastasize to every distant organ in advanced disease, metastases to the gastrointestinal tract are very rare.
Case Description/Methods: A 45-year-old African American male with a past medical history of end stage renal disease and hypertension presented to the emergency department with weakness, abdominal bloating, and 15 pound weight loss for 1 month. He had not made urine in years, however in the prior month he began to have painless hematuria. Computed tomography (CT) of the abdomen demonstrated lymphadenopathy throughout the abdomen, ascites, bilateral atrophic, cystic kidneys, and renal transplant in the right pelvis. Paracentesis was performed and cytopathology of the peritoneal fluid collected was suspicious for adenocarcinoma. The patient underwent upper and lower endoscopy that revealed atypical segmental sigmoid colitis, which was biopsied. Biopsy was suggestive of metastatic disease. Immunohistochemical analysis was remarkable for PAX8+, CDX2−, CK20− consistent with a renal cell carcinoma metastasis (Figure). Patient was unable to receive chemotherapy or radiation due to performance status and went into hospice.
Discussion: Gastrointestinal metastasis is rare in RCC. Compared to the stomach and small bowel, colon metastasis is even more rare and has little mention in medical literature. The most prevalent malignancies that spread to the colon are breast cancer, stomach cancer and melanoma. The duration between diagnosis of the initial tumor and metastasis may range from months to years. The colon metastasis timing in our example is unknown. Interestingly, the age of presentation in our patient is unusual from most RCC cases with metastasis to the colon. Many cases in prior publications were above 60 years old, with only one case being 35 years old.The overall 5-year survival rate in patients with RCC colonic metastases can be less than 10%, but surgical resection can improve survivability to 88 percent. Unfortunately, our patient was not a candidate for surgery or medication upon presentation and perished soon after his diagnosis.



[2121] **Figure 1.** Hematoxylin and Eosin Staining Demonstrating Normal Colonic Mucosa with Abnormal Renal Cell Carcinoma Metastasis.

S2122

Rectovaginal Endometriosis Mimicking Irritable Bowel Syndrome

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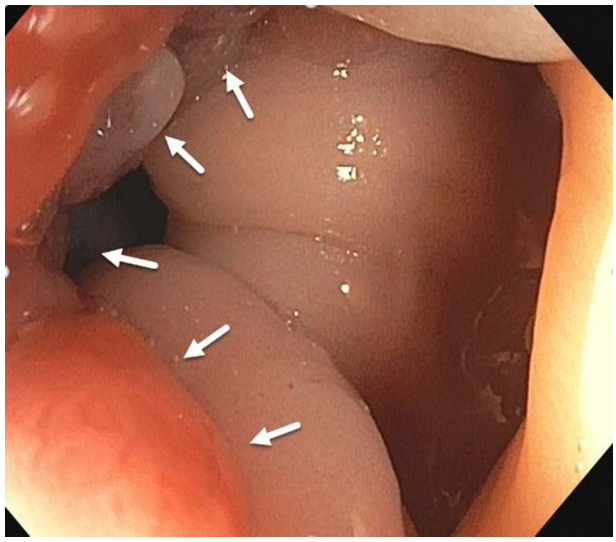
Introduction: Rectovaginal endometriosis is the deposition of uterine tissue in the pelvis between the rectum and vagina. Identifying rectovaginal endometriosis is challenging because, though typically asymptomatic, rectovaginal endometriosis can present with symptoms that mimic irritable bowel syndrome (IBS) or colorectal cancer. Furthermore, there is no established disease-specific endoscopic and radiological diagnostic criteria. As the role of endoscopy in the assessment of bowel involvement is controversial, we present a case of rectovaginal endometriosis diagnosed on colonoscopy.
Case Description/Methods: A 35-year-old female with chronic abdominal pain, associated with alternating constipation and diarrhea, presented with new onset abdominal bloating and abdominal pain with defecation. She complained of increased symptom severity during her menstrual period and reported significant weight loss. There was no tenderness in the lower abdomen, rebound or guarding on examination. Routine lab results were only remarkable for mild anemia. A colonoscopy was performed, which revealed a 75% circumferential mass in the rectum at 20 cm (Figure). Biopsies of the mass revealed colonic mucosal epithelium with pseudostratified glands lacking goblet cells in the lamina propria with granulation tissue-like stroma. Immunohistochemical analysis was positive for paired box gene 8 (PAX8), estrogen receptor (ER), and CD10, indicating the presence of endometrial tissue. Subsequent CT and MRI scans revealed invasive endometriosis involving the anterior wall of the rectum. The patient was scheduled for Gynecology consultation.
Discussion: Rectovaginal endometriosis is uncommon, affecting between 3.8% and 37% of all patients with endometriosis. Though it is rarer than ovarian or peritoneal endometriosis, when symptomatic, rectovaginal endometriosis is the most severe and painful variant of extragenital endometriosis. Most cases affecting the colon present in superficial layers, while deeply infiltrative disease (lesions that exceed 5 mm in depth) involving the muscularis mucosae occurring 95.1% of cases reported in a study. However, the incidence of colonoscopic findings of intestinal endometriosis in deep pelvic endometriosis is quite low (4%).



[2122] **Figure 1.** Rectovaginal endometriosis presenting as a 75% circumferential mass in the rectum at 20 cm.

S2123

Refractory Case of Malignant Eosinophilic Colitis Leading to Ischemic Colitis

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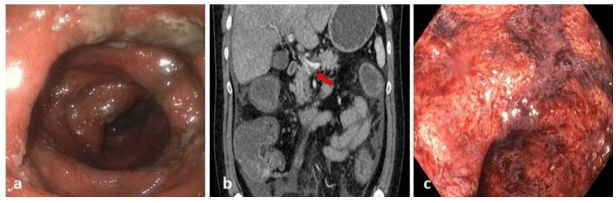
Introduction: Eosinophilic colitis (EC) is a rare inflammatory condition involving eosinophilic infiltration of the mucosa in the absence of a secondary cause or peripheral eosinophilia. Clinically, EC presents with non-specific symptoms. We present a case of malignant EC that is refractory to different therapies.
Case Description/Methods: A 30 years old male with known EC on azathioprine, pulmonary embolism and superior mesenteric venous (SMV) thrombosis onrivaroxaban, had multiple admissions with abdominal pain and hematochezia secondary to *Clostridioides difficile* (*C. diff*). His rivaroxaban and azathioprine were held given his hematochezia and recurrent infections. He presented a month later with worsening symptoms but *C. diff* was negative. CT abdomen/pelvis showed non-occlusive SMV and portal venous (PV) thrombosis with signs of ischemia of the sigmoid colon (Figure 1b). Patient underwent percutaneous transhepatic SMV/PV aspiration thrombectomy that was complicated by a large right hemothorax, causing hemorrhagic shock. Subsequent flexible sigmoidoscopy showed signs of colonic ischemia (Figure 1a). Colonic biopsies demonstrated active colitis without evidence of chronicity, and 60 eosinophils per high powered field. Patient underwent a subtotal colectomy with end ileostomy with clinical improvement immediately postoperatively. He was discharged on a steroid taper and apixaban. He was started on the interleukin-5 (IL-5) inhibitor benralizumab for his EC. Outpatient follow-up was notable for continued rectal bleeding. Flexible sigmoidoscopy showed diffuse severe erythema, contact bleeding, and friable mucosa throughout the rectal pouch (Figure 1c). Vedolizumab was started in combination with benralizumab, however, on long-term outpatient follow-up, no notable clinical or endoscopic improvements were noted on combination therapy. Multi-disciplinary decision in conjunction with patient resulted in planned proctocolectomy with permanent end ileostomy.
Discussion: There are currently no FDA approved management options for EC. The IL-5 inhibitor Benralizumab is FDA approved for treatment of eosinophilic asthma and therefore it was worth a trial in this patient. In a small number of case reports, Vedolizumab has shown some clinical improvement as well as reduction in eosinophilia in EC patients. Due to the rarity of EC diagnosis, data for therapies in EC is severely lacking. To our knowledge, this is the first case of a patient with severe refractory EC that led to the development of ischemic colitis.



[2123] **Figure 1.** (a) shows an endoscopic image of ischemic colitis. (b), the red arrow points at the portal vein thrombosis and (c) shows diffuse severe erythema, contact bleeding, and friable mucosa throughout the rectal pouch.

S2124

Shisto or No?: A Rare Case of Signet Ring Cell Carcinoma of the Rectum Mimicking Schistosomiasis

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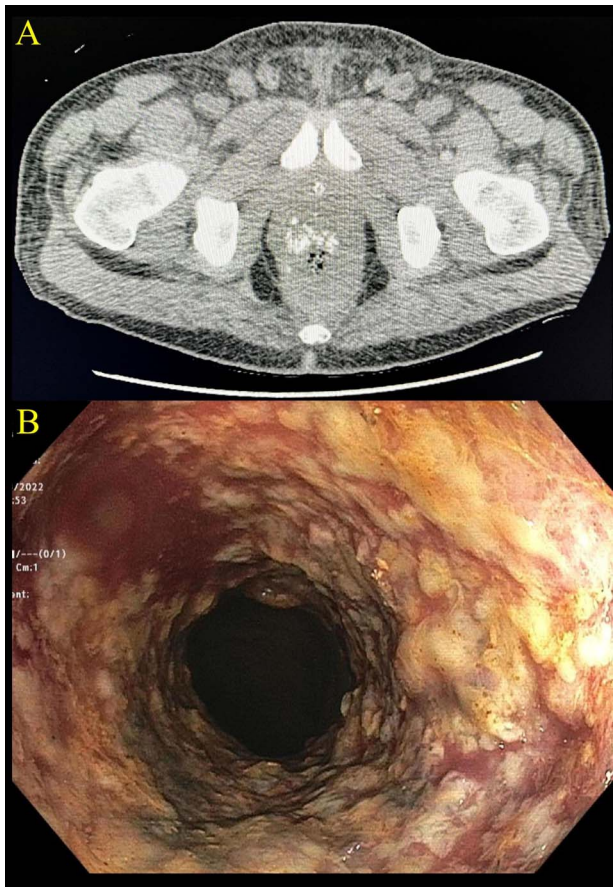
Introduction: Signet ring cell carcinoma (SRCC) of the rectum is a rare type of colorectal cancer with an incidence of less than 2%. SRCC is associated with poor prognosis, and often diagnosed at an advanced stage. While rare in the general population, SRCC occurs in up to 25% of schistosomiasis associated colorectal cancer. We report a case of SRCC in a patient with clinical features that mimicked colorectal and genitourinary schistosomiasis.
Case Description/Methods: A 38-year-old male immigrant from rural Cuba presented with a 3 month history of urinary retention, intermittent fevers, and hematuria requiring placement of indwelling foley. Physical exam and vital signs were otherwise normal. Hb was 8.5 G/DL, MCV 85 fl, Creatinine 1.7 mg/dL. CT of the abdomen and pelvis with IV contrast revealed severe bilateral hydroureteronephrosis, concentric bladder wall thickening, splenomegaly, enlarged bilateral inguinal lymph nodes, and concentric submucosal thickening of the distal sigmoid/rectum with extensive calcifications. Colonoscopy revealed severe, diffuse, circumferential inflammation, narrowing, and ulceration from anus to sigmoid. While colitis was suspected, rectosigmoid biopsy showed mucinous adenocarcinoma with signet ring cell features. While we suspected schistosomiasis, Schistosoma IgG Ab was normal. The patient was advised to undergo further workup and chemotherapy, but he declined further treatment (Figure).
Discussion: Schistosomiasis is a parasitic disease known to have an association with bladder neoplasia and gastrointestinal manifestations in the form of colitis and rectal calcifications. We suspect that due to his extensive rectosigmoid cancer our patient presented with features mimicking schistosomiasis, namely extrinsic genitourinary compression causing hydroureteronephrosis with hematuria, and cancer appearing like colitis. This case is instructive in that we are reminded of the interesting presentation of schistosomiasis as well as the occasional presence of signet cell cancer in the lower gastrointestinal tract. While the majority of SRCC arise in the stomach, occasionally this entity can present as an isolated primary SRCC of the rectum. Treatment with targeted therapy and chemotherapy have limited effect on improving survival. In conclusion, though SRCC of the rectum is rare, clinicians should consider this in the differential in patients presenting with risk factors for both schistosomiasis and SRCC of the rectum.



[2124] **Figure 1.** A, CT of the pelvis with IV contrast showing concentric submucosal thickening of the distal sigmoid/rectum with calcifications. B, Colonoscopy showing severe circumferential inflammation, narrowing, and ulceration of the sigmoid colon.

S2125

Short Time Recurrence of Retroperitoneal Desmoid Tumor in Patient With Familial Adenomatous Polyposis

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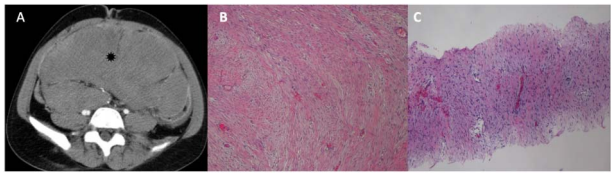
Introduction: A Desmoid Tumor (DT) is a locally invasive, non-metastatic mesenchymal stem cell tumor that typically manifests as a soft tissue mass occurring in muscles, fasciae and aponeuroses. We present a case of a patient with recurrence of a retroperitoneal DT shortly after resection.
Case Description/Methods: A 34-year-old male presented with abdominal pain found to have a large (11 × 14.4 * 14 cm) intrabdominal mass. IR transcatheter biopsy of the mass confirmed DT. He underwent bidirectional endoscopy and found to have more than hundred adenomatous colon polyps. Genetic testing confirmed APC mutation. Patient was diagnosed with DT associate with Familial Adenomatous Polyposis (FAP). He underwent radical resection of mesenteric mass and small bowel (20 cm of terminal ileum), omentectomy as well as total colectomy with ileorectal anastomosis. There was no evidence of lymphoid involvement. About 3 months later, he was re-admitted for increased abdominal girth with abdominal pain. MRI scans demonstrated a new, extensive, lobulated soft tissue mass occupying the entire abdominal cavity measuring 23.4 × 12.5 × 24.2 cm. Biopsy of the mass confirmed recurrent DT. Given the large size and proximity to the superior mesenteric artery, the mass was deemed to be unresectable. Patient was initially started on palliative systemic treatment with liposomal Doxorubicin. Due to lack of response, he was then switched to weekly methotrexate and Vinblastine (Figure).
Discussion: DTs are rare neoplasms, making up only 0.03% of all neoplasms and 3% of soft tissue tumors. They typically include the abdominal wall, extremities, and mesentery. Although the etiology of DTs is not well known, there are several risk factors that are associated with their occurrence. Genetic syndromes such as FAP and Gardner syndrome have a well-known association with DTs. Other associations

include antecedent trauma to the site of the lesion, pregnancy, and female sex. Numerous studies have been done assessing the efficacy of surgery, radiotherapy, and chemotherapy in managing DTs. However, none have shown conclusive benefit. The recurrence rate, particularly following surgical management, has been found to be as high as 77%. Given the lack of definitive management and high recurrence rates, treatment options should likely include combination of both surgical intervention and systemic treatment after discussing options and adverse effects of treatment with the patient.



[2125] **Figure 1.** A, Contrast enhanced CT axial through the lower abdomen demonstrating recurrence of large mass now occupying the majority of the abdominal cavity (black star); B, Spindle cell lesion, with fascicular and loose storiform growth patterns (H&E, 40×) prior to resection; C, Recurrent tumor with pathology demonstrating spindle cell lesion with more edema and/or myxoid stroma.

S2126

Sevelamer-Induced Colitis

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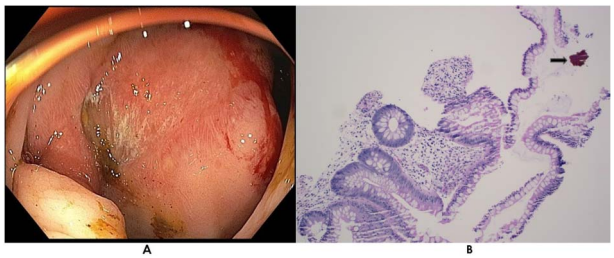
Introduction: Drug-induced Gastrointestinal (GI) injury has been well established throughout the literature and continues to prevail with the ever-growing expansion of pharmaceutical drug development. Mucosal injuries due to medications ranging from common over-the-counter drugs to novel chemotherapeutics, have been one of the more common findings seen both endoscopically and histologically in drug-induced GI injury. Though frequently seen with NSAIDs, iron pills, and bisphosphonates, lately, resin-based binders like Sevelamer have shown an increased incidence of GI mucosal injuries. Sevelamer is an oral phosphate binder widely used to treat hyperphosphatemia in patients with chronic kidney disease. Here we present a case of Sevelamer induced colitis in a patient on Sevelamer Carbonate therapy for hyperphosphatemia secondary to acute kidney injury.
Case Description/Methods: 34 year old male with history of hypertension, obesity class III status post sleeve gastrectomy, OSA, congestive heart failure, and a recent diagnosis of COVID-19 was admitted to the MICU for acute hypoxemic respiratory failure requiring intubation. His hospital course was complicated by worsening renal function and oliguria with creatinine 8.9 and phosphorus 6.4. He was started on hemodialysis (HD), followed by Sevelamer Carbonate 0.8 g TID then increased to 1.6 g TID. Weeks after initiating HD, he developed bright red blood per rectum requiring intermittent transfusions. CT abdomen pelvis and mesenteric angiogram were unremarkable. Upper GI endoscopy showed a Forest Class III duodenal ulcer. Colonoscopy showed localized severe friable ulcerated mucosa with loss of vascular pattern in the cecum and ascending colon. Biopsy at these sites revealed mucosal ulcerations with granulation tissue with Sevelamer crystal deposits. Hematochezia improved on discontinuing Sevelamer (Figure).
Discussion: Sevelamer is a calcium-free oral phosphate binder that has replaced calcium-based binders to treat hyperphosphatemia. Common side effects include nausea, vomiting, and diarrhea. GI mucosal injury from resin-based binders has been reported, although colitis induced by Sevelamer crystal deposition is rare. Previous literature shows a wide range of presentations, including ulcerations, GI bleeding, and colonic strictures. As with prior reports, we show similar endoscopic and histological findings from our patient consistent with this rare entity.



[2126] **Figure 1.** A, Colonoscopic finding showing erythematous ulcerated mucosa in the proximal ascending colon. B, Biopsy from proximal ascending colon site showing granulation tissue with ulceration. The black arrow indicates the Sevelamer Crystal deposition, showing the characteristic "Fish Scale" pattern.

S2127

Recurrent or Concurrent Colitis: Immune Checkpoint Inhibitor-Induced Colitis vs CMV Colitis

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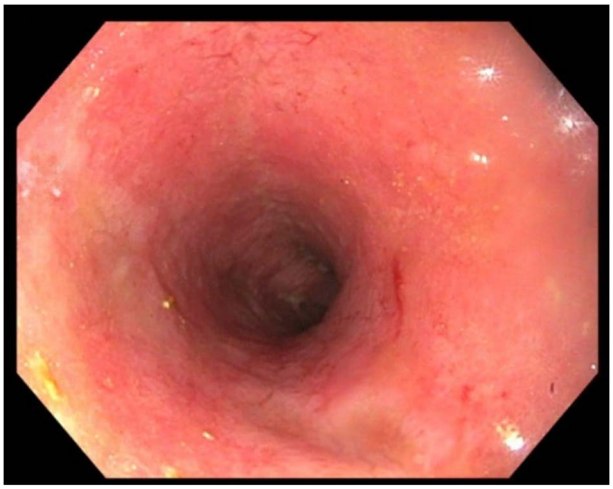
Introduction: Diarrhea is among the most common adverse events associated with pembrolizumab and other immune checkpoint inhibitors (ICIs). The successful treatment of diarrhea depends on the timely and accurate diagnosis of the underlying etiology. We present a case of refractory diarrhea due to coinciding cytomegalovirus (CMV) colitis in a patient who developed pembrolizumab-induced colitis.
Case Description/Methods: 88-year-old White male presented to the hospital with chronic diarrhea for 3 months. He was diagnosed with T4bN0Mx left thigh melanoma, for which he was started on palliative immunotherapy with pembrolizumab one year back. For a year, he tolerated pembrolizumab well without any symptoms until he was hospitalized for ongoing diarrhea for 2 weeks. His fecal calprotectin was elevated, CMV PCR was undetectable, and CMV immunostaining was negative. Sigmoidoscopy was significant for the congested, erythematous, and inflamed mucosa in the distal sigmoid colon, suggesting acute colitis (Figure 1). This was assumed to be pembrolizumab related to colitis, and he was discharged on a prednisone taper. However, he continued to have diarrhea, and a couple of months later, he was readmitted for similar complaints. An extensive infectious disease workup was done to rule out other causes of chronic diarrhea. CMV DNA was detected by PCR (>5000 copies/mL), although histopathological studies were negative for CMV inclusions. Our patient was started on valganciclovir infusion for 2 weeks and received symptomatic management and anti-diarrheal agents. Repeat CMV titers trended down, and his diarrhea improved (Figure).
Discussion: Treatment with ICIs is often associated with transient but occasionally severe colitis. The diagnosis of ICI diarrhea requires thorough testing to rule out infectious and other inflammatory causes of colitis; an endoscopic biopsy is ultimately needed to make the diagnosis. Interruption of the ICI and systemic immunosuppression with corticosteroids optimizes outcome in most patients. On the other hand, corticosteroid immunosuppression can lead to activation of CMV, manifesting as transient improvement and then worsening to refractory diarrhea. Repeat infectious workup and endoscopic re-evaluation with tissue biopsy are needed to confirm the diagnosis of CMV colitis. Prompt discontinuation of corticosteroids and initiation of antivirals leads to spontaneous resolution of symptoms.



[2127] **Figure 1.** Colonoscopy showing the diffuse area of moderately congested, erythematous, and inflamed mucosa in the distal sigmoid colon.

S2128

Rectal Ischemia in a Patient After EVAR and COVID-19

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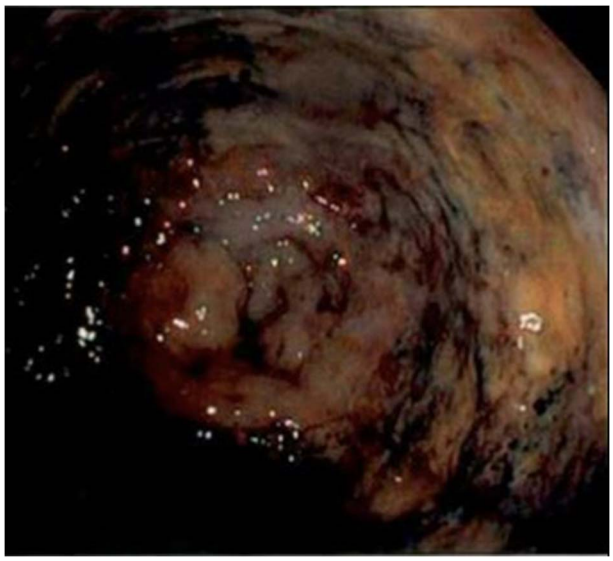
Introduction: Ischemic proctitis is a rare, but serious, source of GI bleeding as mortality rates approach 20-40%. Patients for which ischemia should be considered are those with previous surgery, older patients, and those with known peripheral arterial disease.
Case Description/Methods: 80-year-old male with history of hyperlipidemia and hypertension presented to the hospital for shortness of breath secondary to COVID-19 pneumonia. His respiratory status continued to decline requiring mechanical ventilation and ICU admission. During his admission, he was found to have acute left lower extremity ischemia requiring stenting of his superficial femoral artery and abdominal endovascular aneurysm repair (EVAR). He was started on anticoagulation with heparin infusion. His hospital course was further complicated large volume maroon-colored stools concerning for lower GI bleed. Colonoscopy was performed at the bedside to further evaluate. In the rectum, there were circumferential ulcerations with inflammation and exudate, extending 10 cm from the anal verge. Biopsies were consistent with rectal ischemia. Unfortunately, soon after the patient developed worsening acidosis requiring CVVHD and increased requirement for pressor support. The family ultimately decided to pursue comfort care and the patient was palliatively extubated (Figure).
Discussion: Rectal ischemia is rare as the rectum has blood supply from the inferior mesenteric and bilateral iliac arteries. In our patient, during EVAR graft repair, the IMA was occluded by a stent, the iliac arteries however, remained intact providing the middle rectal and pudendal artery as sources of collateral blood supply. It is hypothesized that a hypercoagulable state caused by COVID-19 infection coupled with ongoing hypotension in the setting of critical illness in our patient with significant peripheral arterial disease led to the low flow state in bilateral iliac arteries causing ischemic proctitis. Rectal ischemia must be considered early in patients because, while most cases of lower GI bleeding can be treated conservatively, rectal ischemia is an indication for prompt surgical intervention. Surgical intervention is required to remove necrotic bowel and potential sources of infection causing septic shock.



[2128] **Figure 1.** Circumferential rectal ischemia as seen by colonoscopy.

S2129

Sevelamer-Related Colitis Presenting as Painless Hematochezia

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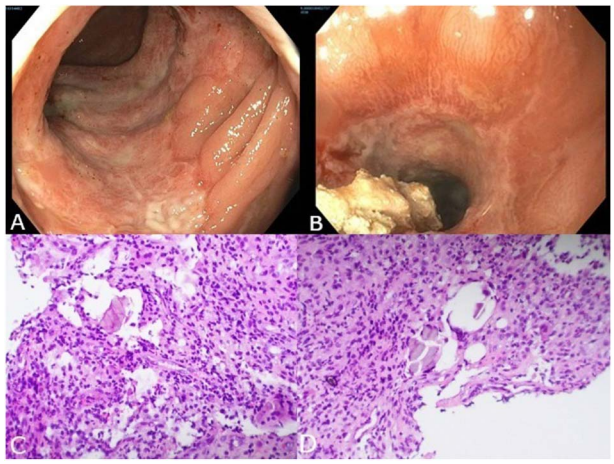
Introduction: Sevelamer-related colitis (SRC) is rarely reported in the literature and likely underrecognized as it presents solely in patients with complex medical comorbidities that potentially confound the diagnosis and can masquerade endoscopically as colonic ischemia. We present 2 cases of painless hematochezia in patients with suspected SRC.
Case Description/Methods: **Case 1:** 58-year-old male with end stage renal disease on hemodialysis (HD) presented with 2 days of painless, large volume hematochezia resulting in acute anemia with hemoglobin (Hgb) of 9.2 g/dL. His vital signs were within normal range and his abdomen was soft and nontender. Medication list was notable for sevelamer carbonate for secondary hyperparathyroidism. Colonoscopy demonstrated a 2 cm circumferential ulcer in the distal transverse colon (Figure a) with histopathologic findings of active colitis with ulceration, marked crypt distortion, and rare foci of pill crystalline fragments within the fibrinopurulent exudate which were morphologically consistent with sevelamer (Figure c). **Case 2:** 60-year-old male with ulcerative pancolitis in deep remission on infliximab who developed acute onset, painless, and profound hematochezia during protracted hospitalization for idiopathic acute necrotizing pancreatitis complicated by acute renal failure requiring 2 weeks of treatment with HD and sevelamer carbonate for persistent hyperphosphatemia. On evaluation, he was notably tachycardic with HR 110 s but normotensive with a soft, nontender abdomen and Hgb near his baseline at 7.7 g/dL. Flexible sigmoidoscopy revealed a 9mm circumferential stricture with ulceration in the distal sigmoid colon (Figure b) which was extensively biopsied revealing exuberant granulation-type tissue and fibrinopurulent exudate with admixed fragments of pill crystalline material that is morphologically consistent with sevelamer (Figure d). In both cases sevelamer was discontinued with resolution of hematochezia.
Discussion: Sevelamer is a commonly prescribed medication which is linked with gastrointestinal mucosal injury. Although difficult to distinguish from colonic ischemia or alternative causes of drug induced colitis it is important to maintain a high index of suspicion. For pathologists, obtaining multiple histological levels is important to identify the pill crystalline structures. Multidisciplinary management with nephrology is prudent to assess if the patient is a candidate for an alternative phosphate binder as this may reduce the risk of recurrent colitis.



[2129] **Figure 1.** (A) Distal transverse colon circumferential ulcer with edema and friability. (B) Distal sigmoid colon stricture with luminal narrowing to 9 mm in diameter and circumferential ulcerations and friability. (C and D) H&E stain, 20× objective: markedly active colitis with crypt architectural distortion, extensive ulceration, fibrinopurulent exudate, and occasional foci of pill crystalline fragments embedded within the fibrinopurulent exudate. These crystalline structures are 2-toned in color with an eosinophilic pink hue and rusty yellow coloration, classic for the appearance of sevelamer.

S2130

Rectal Xanthoma: A Rare Clinical Finding

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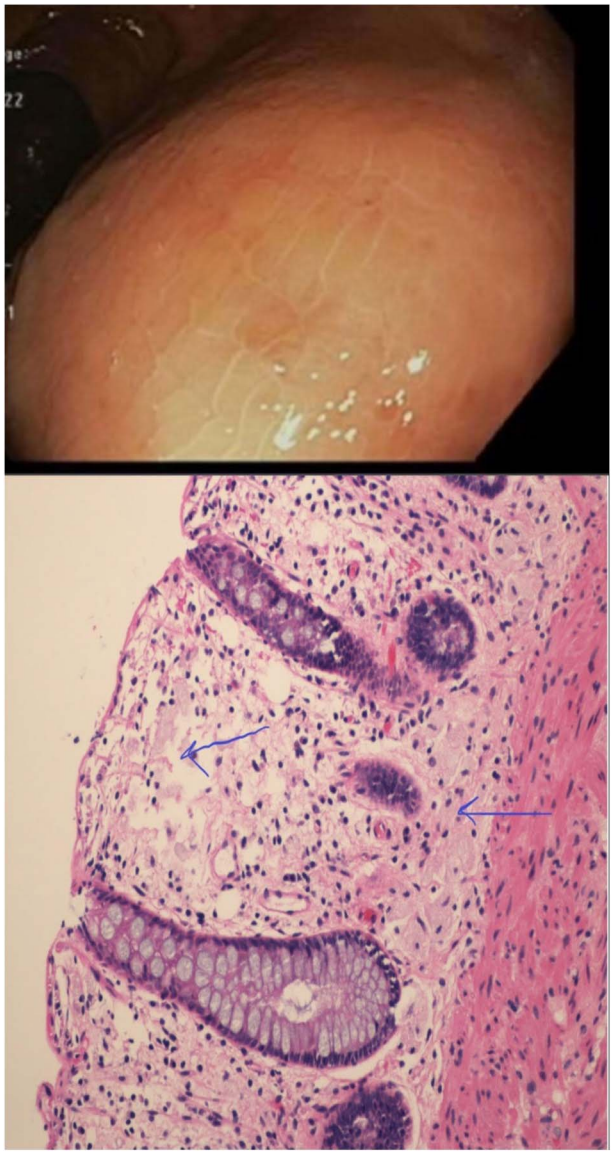
Introduction: Xanthomas are localized lipid deposits within an organ system. They are more commonly found as cutaneous lesions and less likely to appear in the gastrointestinal tract. The incidence of gastrointestinal xanthomas is not well documented, but the vast majority of authors agree they occur more frequently in the stomach. Colonic xanthomas are rare and usually incidental endoscopic findings. There are several case reports that present gastrointestinal xanthomas, however a small subset of these cases are located in the rectum. Here we present a case of rectal xanthoma and discuss its macroscopic and microscopic features.
Case Description/Methods: A 55-year-old female with a recent diagnosis of atrophic metaplastic autoimmune gastritis presents for colonoscopy. Per chart review, patient had a normal colonoscopy in 2012. During the colonoscopy in 2022, one 10 mm sessile polyp was resected in the cecum; pathology returned as hyperplastic polyp. In the rectum was an area concerning for a submucosal lesion, encompassing about one quarter of the rectal circumference. Overlying it was an area of mucosa with hues of yellow which was biopsied. Pathology showed fragments of colonic mucosa with mild chronic inactive inflammation with histiocytic aggregate and focal surface glandular hyperplasia suggestive of xanthoma. Lipid panel available from 2019 showed LDL 100 with other levels within normal range (Figure).
Discussion: Colorectal xanthomas are intestinal lesions with aggregates of lipid laden macrophages called foamy histiocytes. These cells are distributed in the lamina propria, between the colonic glands and muscularis mucosa. Unlike cutaneous xanthomas, gastrointestinal xanthomas are not associated with dyslipidemia. There has been a reported case of colonic xanthomas presenting as submucosal masses in the rectum and sigmoid. In a case series of 28 patients with colorectal xanthomas, 23 were sessile and 5 were pedunculated. Twelve xanthomas appeared reddish in color, 5 were white, and 2 were of a yellow hue. The relationship between colorectal xanthomas and malignancy is unclear. Of the 28 colorectal xanthomas, 4 hyperplastic lesions were found within the xanthoma, while 4 adenomas and 2 adenocarcinomas were found adjacent to xanthomas. Chronic injury is believed to be associated with the cause of colorectal xanthomas. In our case, a sigmoidoscopy with EUS is planned to rule out a submucosal mass. Adding case reports to the literature will help assess potential correlation with polyps and malignancies.



[2130] **Figure 1.** (Top) Rectum with appearance of submucosal lesion and localized area of yellow hue in mucosa (bottom) Foamy histiocytes confined to the lamina propria.

S2131

Sevelamer-Induced Colitis: Phos-Friend or Phos-Foe?

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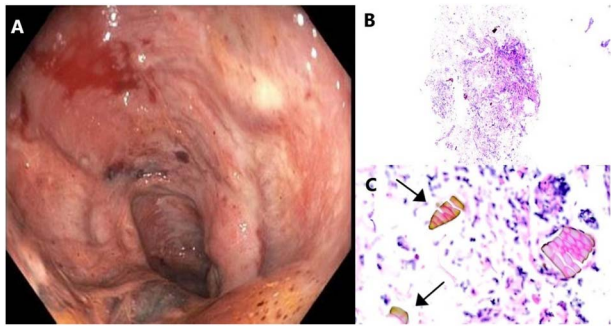
Introduction: Sevelamer use is phosphate binder used in patients with chronic kidney disease (CKD) and end-stage renal disease (ESRD) and is associated with gastrointestinal (GI) side effects such as vomiting, nausea and diarrhea. However, phosphate binders have also been reported to cause colonic ischemia. Here, we describe a case of sevelamer-induced colitis.
Case Description/Methods: A 66-year-old male with a history of ESRD and chronic hypotension presented to the emergency room with one episode of dark bloody stools for the past day. He was afebrile, HR of 68 and a BP of 93/46. He was started on IV fluids, PPIs and was kept NPO. An upper endoscopy was unrevealing for significant pathology. Colonoscopy revealed friable, erythematous mucosa in the ascending colon and extensive ulcerations from the transverse to descending colon. Biopsies were taken. Histology exhibited colonic mucosa with areas of necrotic debris with acute inflammation and ulceration. However, the epithelial necrosis was not of vascular ischemic origin. The necro-inflammatory debris present was described as curved crystalloids with an irregular 'fish-scale' pattern. These histological findings are consistent with sevelamer-induced colitis. The patient's sevelamer was discontinued and his fludrocortisone and midodrine were continued for blood pressure support. He received dialysis and was discharged back to his facility (Figure).
Discussion: Initially there was concern for ischemic colitis given his history of ESRD, PVD, chronic hypotension. However, upon medication review, we noted he was taking sevelamer. Colonic ischemia can generally be classified into right colonic ischemia and ischemic colitis. Right colonic ischemia generally involves the superior mesenteric artery and is frequently caused by an occlusive arterial event such as an embolus or thrombosis. In contrast, ischemic colitis is involves the inferior mesenteric artery and is more frequently due a low flow state with no identifiable occlusive event. Many medications have also been associated with self-limited ischemic colitis. Sevelamer is a phosphate binder that binds phosphate within the GI tract. Based on available literature, only an association between the development of colitis and sevelamer use has been made with resolution of the symptoms after sevelamer discontinuation. The exact mechanism of injury from the sevelamer crystals is unknown. This case illustrates a potential mechanism for drug induced colonic ischemia, i.e., crystal deposition within the colonic mucosa.



[2131] **Figure 1.** Mucosal injury seen during colonoscopy (A). Pathology slide displaying sevelamer crystals found on biopsy (B-C).

S2132

Submucosal Mucin Droplets: A Rare Endoscopic Sign of Colonic Adenocarcinoma With Mucinous Features

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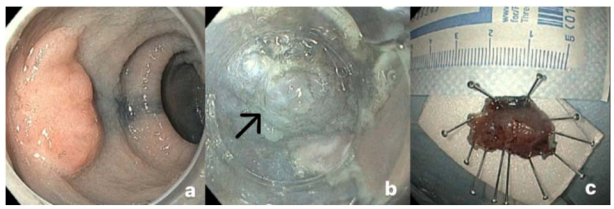
Introduction: Adenocarcinoma with mucinous features (AM) accounts for 10-15% of colon carcinoma. There have been no known endoscopic features of AM. We present a case with colonic AM, with visible extracellular mucin at the time of endoscopic submucosal dissection (ESD).
Case Description/Methods: A 70-year-old White female was referred for endoscopic resection of a 20 mm polyp in the sigmoid colon. Prior incomplete endoscopic mucosal resection was performed at an outside institution and pathology had shown tubulovillous adenoma with HGD and a focus of small irregular glands in a desmoplastic stroma suspicious of invasion. There were no visible features of deep invasion, thus ESD was performed. For submucosal lifting, an ORISE gel (Boston Scientific, MA, USA) was used. Submucosal dissection was difficult due to the presence of severe submucosal fibrosis. During ESD, several thick, clear mucus-like droplets were noted protruding from underneath the lesion. The lesion was successfully removed en bloc without severe bleeding or muscle injury. Pathology showed an invasive well-differentiated adenocarcinoma with mucinous features. Neoplastic cells were focally seen < 1mm from the deep margin and although there was no lymphovascular invasion or tumor budding, acellular mucin present at the deep margin. The patient proceeded to a sigmoid colectomy and the surgical specimen demonstrated no residual carcinoma. All margins were negative for dysplasia and nineteen lymph nodes were negative for tumor (Figure).
Discussion: Colorectal AM is characterized by the presence of extracellular mucin entailing < 50% of tumor volume. In this case, extracellular mucin was visualized from underneath the tumor during ESD and pathology subsequently confirmed the diagnosis of AM. To our knowledge, this phenomenon has not previously been reported. Mucinous histologic type, compared to nonmucinous adenocarcinoma is associated with a higher T staging at diagnosis, greater risk of metachronous metastases and worse survival. Due to high-risk pathologic feature found on the ESD specimen, the patient proceeded to subsequent surgical resection. Importantly, new synthetic submucosal lifting agents such as ORISE gel can demonstrate a similar appearance to mucin in earlier stages and can result in a foreign body granulomatous reaction in later stages. The impact of this agent on the pathological evaluation of ESD specimens should be noted to avoid misdiagnosis.



[2132] **Figure 1.** Endoscopic identification of a laterally spreading lesion with mucin protruding during ESD in the sigmoid colon.

S2133

Suck and Snare: A Technique for Rapid, Complete, and Safe Cold Snare Polypectomy of Sessile Polyps Greater Than One Centimeter

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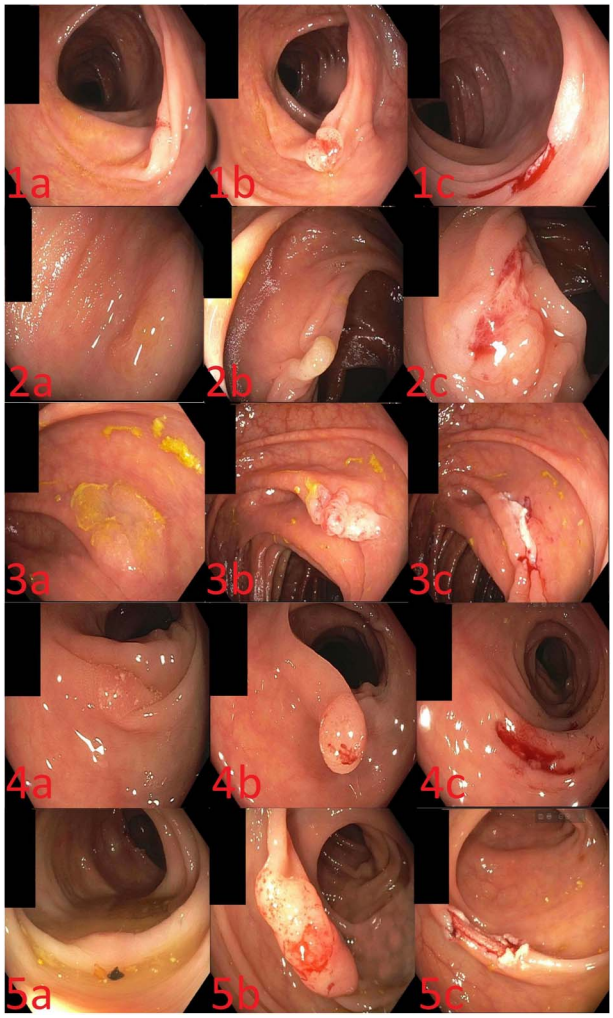
Introduction: Snare polypectomy of flat colon polyps may be challenging when boarders are indistinct or if the snare wire slides over the flat mucosal surface as the snare closes. Current guidelines suggest cold or hot snare polypectomy with or without submucosal injection for the removal of polyps between 1 and 1.9 centimeters (cm). Injection lift polypectomy and hot snare endoscopic mucosal resection of flat lesions can be time intensive and carries risks of perforation, post polypectomy syndrome, and bleeding. Cold snare technique has become increasingly utilized for Paris class 1s and 1sp polyps of any size. We propose an adaptation of the "suction polypectomy technique," previously described for the removal of less than 1 cm sessile polyps, for use in cold snare polypectomy of sessile polyps greater than 1 cm.
Case Description/Methods: Technique: Olympus high definition colonoscopes (CF-HQ190L/I) were used to identify sessile polyps between 10-15 mm (Table). The snare was passed though the instrument and pulled back slightly into the channel. Polyps were then suctioned using the tip of endoscope for 1-2 seconds. This technique was repeated over the surface of the entire lesion until the polyps puckered up, developing a more polypoid shape. The polyps were then immediately resected via cold snare polypectomy (Figure). All polyps were completely resected and there were no procedural complications.
Discussion: This series shows that the "suction polypectomy" technique using a cold snare for polyps 1 cm or greater is feasible and safe with the benefits of not requiring the use of lifting agents, injection needles, or significant technical expertise. Future studies are required to determine the feasibility of suction polypectomy in lesions greater than 1.5 cm and the safety and efficacy of the technique in larger prospective cohorts.



[2133] **Figure 1.** Endoscopic images of the technique. Images labeled "A" show the polyp before suction. Images labeled "B" show the polyp after suction. Images labeled "C" show post-polypectomy.

Table 1. Characteristics of Polyps Removed

Patient #	Polyp Size	Location	Pathology Diagnosis	En Bloc versus Piecemeal	Complications (Immediate/Delayed Bleeding or Perforation)
1	10 mm	Descending Colon	Tubular Adenoma in Fragments	En Bloc	None
2	10 mm	Ascending Colon	Sessile Serrated Adenoma	En Bloc	None
3	12 mm	Ascending Colon	Sessile Serrated Adenoma	En Bloc	None
4	12 mm	Ascending Colon	Tubular Adenoma in Fragments	En Bloc	None
5	11 mm	Transverse Colon	Tubular Adenoma	En Bloc	None

S2134

Signet Ring Cell Adenocarcinoma of Ileocecal Valve

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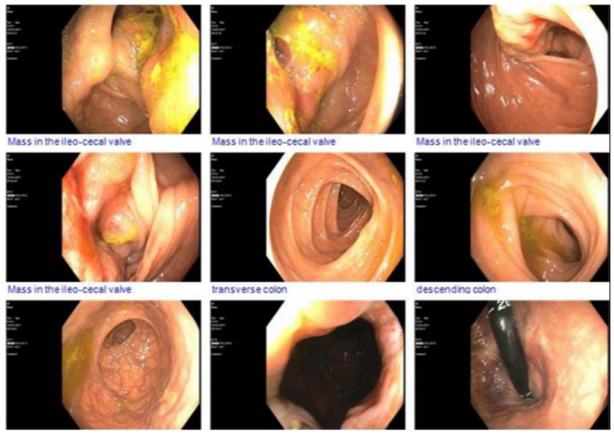
Introduction: The ileocecal valve is a sphincter muscle situated at the junction of the ileum and cecum. Signet ring cell carcinoma is a rare, highly malignant adenocarcinoma of the stomach. Ileocecal valve involvement is uncommon. Long-standing chronic diarrhea, often in association with Crohn's disease, is a known risk factor for signet ring cell adenocarcinoma.
Case Description/Methods: A 61-year-old male patient with past medical history of anxiety, depression, hyperlipidemia, and chronic diarrhea presented with progressively worsening abdominal pain for 3 months. The pain was intermittent, achy in character, and radiated to the lower abdomen. The patient denied any specific exacerbating or relieving factors. The patient endorsed 1-2 loose stools per day for many years. Prior workup for chronic diarrhea included multiple previous colonoscopies which were reported by the patient to be unremarkable. He denied NSAID use or family history of Inflammatory bowel disease. Physical examination revealed bilateral lower quadrant tenderness to palpation. Laboratory data showed Hb 12.7, HCT 37.2, Platelets 200, INR 1.0, B12 272, TSH 1.8, stool Calprotectin 117, stool electrolytes normal, Endomysial IgA, Tissue Transglutaminase IgG and IgA normal, hepatitis C and rapid plasma reagin were also negative. Enhanced computerized tomography of abdomen and pelvis showed thickening of the terminal ileum. A colonoscopy was then performed showing circumferential edema and a partially obstructive mass at the ileocecal valve. Biopsies of the mass demonstrated signet ring cells infiltrating lamina propria consistent with adenocarcinoma of the valve. Subsequently, the patient underwent a laparoscopic right hemicolectomy. The resected colonic tissue contained an 8 cm ileal mass with histology showing a poorly differentiated metastatic signet ring cell adenocarcinoma with an invasion of visceral peritoneum and peri-colonic lymph node involvement (Figure).

Discussion: Signet ring cell adenocarcinoma of the ileocecal valve is an exceedingly rare presentation. Patients are often asymptomatic but may present with non-specific constitutional symptoms. Abdominal pain is typically associated with late or advanced disease. Patients with Crohn's disease greater than 10 years are at an increased risk of developing signet ring cell adenocarcinoma. Chronic diarrhea in the absence of Crohn's disease also represents a risk factor for the development of signet ring cell adenocarcinoma, as was seen in this patient.



[2134] **Figure 1.** Signet ring cell carcinoma.

S2135

Submucosal Myxoma: The Unusual and Unwanted Tumor Inside the Colon

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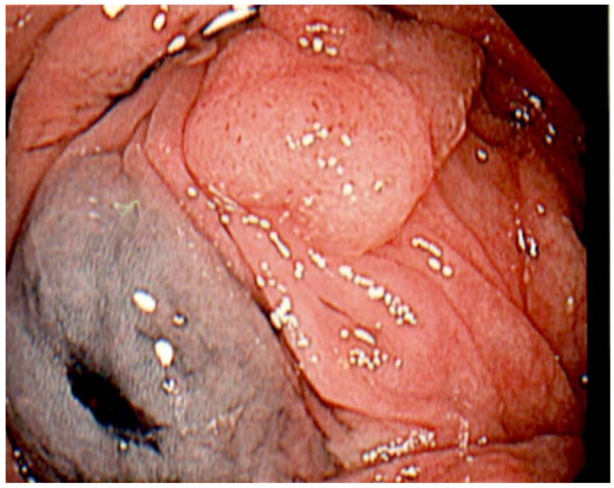
Introduction: Myxomas are benign mesenchymal neoplasms of unknown etiology and those involving the gastrointestinal (GI) tract are extremely rare. We are presenting an interesting case of myxomas in the GI tract, specifically of a polypoid colonic mucosal myxoma. Mucosal colonic myxoma represents a newly identified mesenchymal polyp of the colon and pathologists and gastroenterologists should be aware of this diagnostic entity.
Case Description/Methods: A 60-year-old female with a past medical history of hypothyroidism, hyperlipidemia, gout, anxiety, CKD, and tubular adenomas, presents to the endoscopy unit after being referred for an EMR resection. During the procedure, a large 1.8 cm subpedunculated polyp in the proximal transverse colon is identified via previously placed tattoo. The polyp undergoes Submucosal injection 'Orise' to lift the lesion. After successful lifting, a 27mm stiff snare was used to perform the hot snare resection. A hemoclip was placed to close the defect. The specimen/resected lesion was then removed via roth net. Microscopic examination performed shows a polypoid colonic mucosa with a tubulovillous proliferation lined by adenomatous epithelium. In the submucosa there is a collection of myxoid stroma with interspersed blood vessels, collagen fragments, and rare spindle cells. The spindle cells are positive for CD34 immunostain and negative for smooth muscle actin, S100, and CD117 immunostains. Alcian blue stain highlights the myxoid stroma. Patient was stable and discharged after having a successful procedure (Figure).
Discussion: Myxoma is originated from mesenchymal tissue and is characterized by the loose textured slimy tissue ofstellate cells, reticulin fibers, and mucoid substance. It is mainly found in the skin, soft tissue, and heart. Tumors that originate from the submucosa tend to protrude into the intestinal lumen as pedunculated masses. Our patient was found to have a polypoid colonic mucosa with a tubulovillous proliferation lined by adenomatous epithelium. Submucosal colonic myxoma represents a newly identified mesenchymal polyp of the colon and pathologists and gastroenterologists should be aware of this diagnostic entity.



[2135] **Figure 1.** Large 1.8 cm subpedunculated polyp in the proximal transverse colon identified via previously placed tattoo. Submucosal injection of 'Orise'; was performed to lift the lesion .

S2136

Spontaneous Colonic Perforation as an Unusual Presentation of COVID-19 Infection: Case Report and Review of Literature

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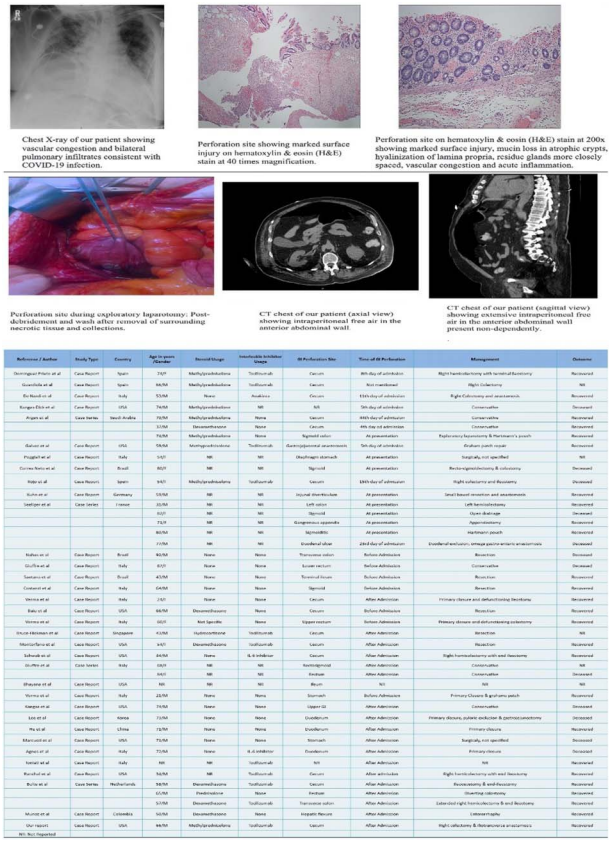
Introduction: Gastrointestinal (GI) manifestations are most frequently reported extra-pulmonary symptoms of COVID-19 infection with a prevalence of 10%-50%. Most common are nausea, vomiting, diarrhea, and abdominal pain. GI perforation especially spontaneous colonic perforations are rare in the disease course.

Case Description/Methods: We report a patient with COVID-19 infection, who developed cecal perforation while recovering from COVID pneumonia, necessitating emergent surgical treatment, and the current literature was reviewed. A 65-year-old male presented with shortness of breath, myalgias and fever. He was admitted to ICU secondary to acute hypoxemic respiratory failure due to COVID 19 pneumonia. He was treated with steroids, tocilizumab and remdesivir. On day-11, he developed severe abdominal pain with worsening leukocytosis. His imaging showed large pneumoperitoneum, suggestive of a perforated viscus. He underwent emergent laparotomy and was found to have non-obstructive cecal perforation. A colonic de-tension and right colectomy with ileo-transverse anastomosis was performed. The tissue pathology showed distended colon, active colitis, transmural granulocytic inflammation, and ulceration suggesting bowel perforation (Figure).
Discussion: ACE2 protein, a cell receptor for SARS-CoV-2, is in glandular cells of gastrointestinal epithelia. Direct viral infection, small vessel thrombosis, or nonocclusive mesenteric ischemia can cause spectrum of bowel findings. SARS-CoV-2 can have direct inflammatory effect on vascular endothelium too. Use of steroids, tocilizumab and systemic coagulopathy seen in severe COVID-19 infection also contributes to these manifestations. In our patient, an acute over-distension of colon, without mechanical distal obstruction, in the setting of COVID-19 infection & tocilizumab led to cecal perforation. Our literature review confirmed only 33 case-studies of bowel perforation in the setting of COVID-19 infection have been reported, with combined 28.5% mortality rate. Considering the worldwide incidence of this pandemic, it is a rare complication. GI perforation is a rare but dangerous complication of COVID-19. Treatment with interleukin-6 inhibitors or steroids is often associated in most cases. Our case underlines the need to be vigilant for severe GI symptoms in setting of COVID-19 infection to improve patients' outcome.



Reference / Author	Study Type	Country	Age in years /Gender	Steroid Usage	Interleukin Inhibitor Usage	GI Perforation Site	Time of GI Perforation	Management	Outcome
Dominguez Prieto et al	Case Report	Spain	73/F	Methylprednisolone	Tocilizumab	Cecum	8th day of admission	Right hemicolectomy with terminal ileostomy	Recovered
Guardiola et al	Case Report	Spain	66/M	Methylprednisolone	Tocilizumab	Cecum	Not mentioned	Right Colectomy	NR
Di Nardo et al	Case Report	Italy	53/M	None	Anakinra	Cecum	11th day of admission	Right Colectomy and anastomosis	Recovered
Kongo Ekiti et al	Case Report	USA	74/M	Methylprednisolone	NR	NR	5th day of admission	Conservative	Deceased
Anjum et al	Case Series	Saudi Arabia	70/M	Methylprednisolone	None	Cecum	14th day of admission	Conservative	Recovered
			53/M	Dexamethasone	None	Cecum	4th day of admission	Conservative	Recovered
			70/M	Methylprednisolone	None	Sigmoid colon	At presentation	Exploratory laparotomy & Hartmann's pouch	Recovered
Galvez et al	Case Report	USA	78/M	Methylprednisolone	Tocilizumab	Gastrojejunostomy anastomosis	5th day of admission	Primary patch repair	Recovered
Pizzighel et al	Case Report	Italy	54/F	NR	NR	Diaphragm stomach	At presentation	Surgically, not specified	NR
Correa Neto et al	Case Report	Brazil	80/F	NR	NR	Sigmoid	At presentation	Rectosigmoidectomy & colostomy	Deceased
Rabir et al	Case Report	Spain	84/F	Methylprednisolone	Tocilizumab	Cecum	13th day of admission	Right colectomy and ileostomy	Deceased
Kuhn et al	Case Report	Germany	59/M	NR	NR	Jejunal diverticulum	At presentation	Small bowel resection and anastomosis	Recovered
Seeliger et al	Case Series	France	35/M	NR	NR	Left colon	At presentation	Left hemicolectomy	Recovered
			82/F	NR	NR	Sigmoid	At presentation	Open drainage	Deceased
			71/F	NR	NR	Gangrenous appendix	At presentation	Appendectomy	Recovered
			46/M	NR	NR	Sigmoiditis	At presentation	Hartmann pouch	Recovered
			77/M	NR	NR	Duodenal ulcer	23rd day of admission	Duodenal occlusion, omega pasta-enteric anastomosis	Deceased
Nahas et al	Case Report	Brazil	46/M	None	None	Transverse colon	Before Admission	Resection	Deceased
Giuffre et al	Case Report	Italy	87/F	None	None	Lower rectum	Before Admission	Conservative	Deceased
Santana et al	Case Report	Brazil	45/M	None	None	Terminal ileum	Before Admission	Resection	Recovered
Costanzi et al	Case Report	Italy	64/M	None	None	Sigmoid	Before Admission	Resection	Recovered
Verma et al	Case Report	Italy	73/F	None	None	Cecum	After Admission	Primary closure and defunctioning ileostomy	Recovered
Bala et al	Case Report	USA	68/M	Dexamethasone	None	Cecum	Before Admission	Resection	Recovered
Verma et al	Case Report	Italy	60/F	Not Specific	None	Upper rectum	Before Admission	Primary closure and defunctioning colostomy	Recovered
Uruba Hikmani et al	Case Report	Singapore	41/M	Hydrocortisone	Tocilizumab	Cecum	After Admission	Resection	NR
Mastrofilippo et al	Case Report	USA	47/F	Dexamethasone	Tocilizumab	Cecum	After Admission	Resection	Recovered
Sahwab et al	Case Report	USA	84/M	None	IL-6 inhibitor	Cecum	After Admission	Right hemicolectomy with end ileostomy	Recovered
Giuffre et al	Case Series	Italy	59/F	NR	NR	Rectosigmoid	After Admission	Conservative	NR
			84/F	NR	NR	Rectum	After Admission	Conservative	Deceased
Dhayane et al	Case Report	USA	NR	NR	NR	Ileum	NR	NR	NR
Verma et al	Case Report	Italy	22/M	None	None	Stomach	Before Admission	Primary Closure & graft-omo patch	Recovered
Keegan et al	Case Report	USA	79/M	None	None	Upper GI	After Admission	Conservative	Deceased
Lee et al	Case Report	Korea	72/M	None	None	Duodenum	After Admission	Primary closure, pyloric exclusion & gastrojejunostomy	Deceased
Yu et al	Case Report	China	73/M	None	None	Duodenum	After Admission	Primary closure	Recovered
Mahmood et al	Case Report	USA	75/M	None	None	Stomach	After Admission	Surgically, not specified	Deceased
Agnes et al	Case Report	Italy	72/M	None	IL-6 inhibitor	Duodenum	After Admission	Primary closure	Deceased
Ismail et al	Case Report	Italy	NR	NR	Tocilizumab	NR	After Admission	NR	Recovered
Kurulkar et al	Case Report	USA	56/M	NR	Tocilizumab	Cecum	After admission	Right hemicolectomy with end ileostomy	Recovered
Richie et al	Case Series	Netherlands	58/M	Dexamethasone	Tocilizumab	Cecum	After Admission	Ileostomy & end ileostomy	Recovered
			65/M	Prednisolone	None	Rectum	After Admission	Diverting colostomy	Recovered
			51/M	Dexamethasone	Tocilizumab	Transverse colon	After Admission	Laparoscopic right hemicolectomy & end ileostomy	Recovered
Munoz et al	Case Report	Colombia	50/M	Dexamethasone	None	Hepatic flexure	After Admission	Colonoscopy	Recovered
Our report	Case Report	USA	64/M	Methylprednisolone	Tocilizumab	Cecum	After Admission	Right colectomy & ileotransverse anastomosis	Recovered
NR: Not Reported									

[2136] **Figure 1.** Images of chest xay, pathology, perforation site and CT scan along with review of literature of all the worldwide cases of colonic perforation

S2137

The Unexpected Quiet Guest in the Colon

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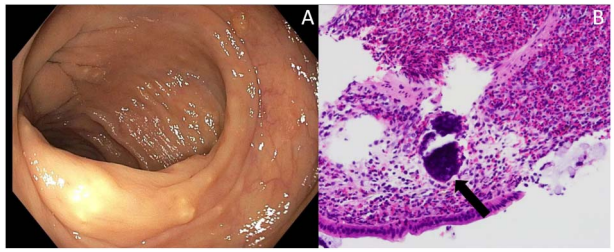
Introduction: Schistosomiasis is a common parasitic infection, more prevalent in Sub-Saharan Africa but rare in developed countries. Schistosomiasis is transmitted through skin contact with fresh water while snails serve as intermediate hosts. Other than intestinal and hepatosplenic schistosomiasis, pulmonary manifestations and genitourinary infection may develop. Gastrointestinal symptoms may include abdominal pain, nausea, bloody diarrhea, tenesmus, and hepatosplenomegaly. We present a case of completely asymptomatic intestinal schistosomiasis diagnosed incidentally during colonoscopy.
Case Description/Methods: A 57-year-old female, raised in sub-Saharan Africa, presented for outpatient colonoscopy after a positive Cologuard test, she didn't have any complaints and her physical exam was benign. Colonoscopy was performed and revealed nodular mucosa in the cecum, splenic flexure, and the rectum. The splenic flexure nodules were characterized by a unique white tipped appearance (Figure A). Biopsies were obtained from these nodules and the histopathology showed colonic mucosa with an eosinophilic granulomatous inflammation associated with Schistosoma egg at the splenic flexure nodular lesions (Figure B). The other nodular areas were identified as benign colonic mucosa with lymphoid aggregate. Stool culture after the colonoscopy was obtained and showed incidental Endolimax nana cysts which was not treated as per infectious disease recommendations. Patient was treated by a course of Praziquantel.
Discussion: Typically, intestinal schistosomiasis is considered a chronic infection and may present with abdominal pain, diarrhea, poor appetite, and weight loss. In severe cases, hematochezia and anemia may also be observed. Endoscopic characteristics may include hypertrophy, granulomas, polyp formation, mural thickening, strictures with erosions or ulcerations. The endoscopic findings of intestinal schistosomiasis may be confused with those of IBD. For appropriate diagnosis, biopsy in multiple sites is required. Schistosoma eggs surrounded by granulomas are the gold standard for diagnosis. Peripheral eosinophilia also supports the diagnosis. Patients with intestinal schistosomiasis are treated with a single dose of Praziquantel 40mg/kg regardless of the symptoms. Gastroenterologists must be aware of the endoscopic characteristics of schistosomiasis, especially when managing patients from endemic areas.



[2137] **Figure 1.** A. White tipped nodular mucosa at splenic flexure. B. H&E section showing colonic mucosa with an eosinophilic granulomatous inflammation associated with Schistosoma egg (arrow). [20x magnification].

S2138

TACE-Induced Ischemic Colitis

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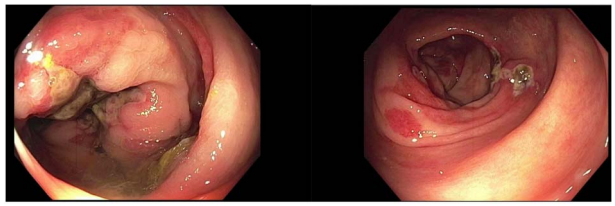
Introduction: Transarterial chemoembolization (TACE) is a locoregional treatment used in patients with hepatocellular carcinoma (HCC). This therapy entails injecting a chemotherapeutic agent into a branch of the hepatic artery supplying blood to the tumor while cutting off blood supply through particle embolization. This procedure may be utilized in a patient who is not a candidate for surgical resection or as a bridge to liver transplantation. Here we present a case of a ischemic colitis in the setting of a recent TACE.
Case Description/Methods: A 65-year-old female with history of HCC underwent an outpatient TACE procedure for a 3.6 cm liver lesion. Soon after the procedure the patient complained of severe abdominal pain and was admitted. On day 2 of hospitalization, she developed significant bright red blood per rectum. Computed tomography (CT) demonstrated mild wall thickening and pericolonic fat stranding in the ascending colon concerning for acute colitis. Lactic acid was elevated at 5.8 mmol/L (normal < 2). Colonoscopy demonstrated multiple ulcers and erythema stretching from the cecum to descending colon suggestive of ischemic colitis. Biopsies demonstrated superficial mucosal erosion and necrosis, crypt atrophy, and lamina propria hemorrhage with hyalinization, consistent with acute ischemic colitis. CT angiography demonstrated a patent abdominal aorta and all major branches. The patient was treated conservatively without further episodes of hematochezia and was discharged home (Figure).
Discussion: Postembolization syndrome is the most common adverse effect of TACE, which occurs in 60 to 80 percent of patients. This has been reported to be related to either tumor necrosis or due to ischemic damage to normal liver parenchyma. One case of gastrointestinal ulceration has been reported after TACE. To date, there has been no reported case of ischemic colitis after TACE. This presentation of ischemic colitis in our patient may be due to regurgitation of embolized particles into superior mesenteric arterial circulation leading to hypoperfusion of the colon, resulting in ischemic colitis. One should consider this presentation on the differential diagnosis in a patient with hematochezia after TACE.



[2138] **Figure 1.** Ascending and transverse colon demonstrating multiple ulcers and erythema suggestive of ischemic colitis on colonoscopy.

S2139

The Great Mimicker Gets Caught! A Rare Case of Syphilis in the Gastrointestinal Tract

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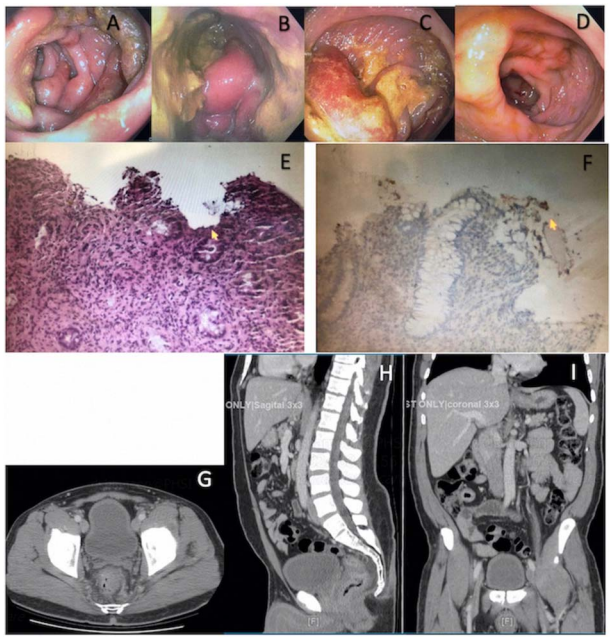
Introduction: Syphilis is a sexually transmitted disease that impacts a vast number of organ systems and may present in different clinical settings. It can mimic various diseases leading to misdiagnosis and incorrect treatment. It is important to properly diagnose syphilis in special populations that are at high risk of contraction.
Case Description/Methods: A 49-year-old transgender female with diabetes mellitus and hyperlipidemia presented to the emergency department with dull abdominal pain in the left upper and lower quadrants for 2 days. She had non-bloody, nonbilious emesis, 10-pound weight loss over 1 month, and constipation for 2 weeks. Laboratory results showed a cholestatic pattern with elevated CA 19-9 and equivocal AMA (Table). Computed tomography (CT) of the abdomen and pelvis showed hepatic steatosis, normal caliber of the biliary system, rectal wall thickening, multiple enlarged perirectal adenopathy, and mild inflammatory infiltration around the rectum suggesting superimposed proctitis (Figure G,H,I). Magnetic resonance cholangiopancreatography was normal. First colonoscopy showed possible rectal mass or severe proctitis with near complete obstruction unable to be traversed (Figure A,B,C). Initial pathology said possible lymphoma or a rare type of colitis (Figure E). Patient was empirically started on ceftriaxone and doxycycline. A second colonoscopy, 4 days later, was successfully completed and inflammation improved (Figure D). Chlamydia and gonorrhea were negative, RPR weakly positive, and FTA was positive. Special stains requested were positive for Treponema pallidum and negative for HH8 confirming the diagnosis of syphilitic proctitis and highly suggestive syphilitic hepatitis (Figure F). Prior to discharge, liver function tests (LFTs) were significantly reduced. The patient received 1-month course of doxycycline.
Discussion: Syphilis is the cause of sexually transmitted proctitis in only 1% of men that have sex with men and transgender females. Few cases of syphilitic proctitis imitating rectal malignancy have been reported. Syphilitic hepatitis presents with intrahepatic cholestatic pattern with normal biliary tract imaging. AMA may be positive prior to treatment. Diagnosis requires abnormal LFTs, serological evidence of syphilis, exclusion of other diseases and normalization of LFTs after treatment. Tissue diagnosis is not required. Syphilis commonly mimics severe pathologies and requires exclusion as well as confirmation of spirochetes for high risk populations with special staining.



[2139] **Figure 1.** Images A/B/C: Colonoscopy images showing inflammation, erythema and thickened rectal folds prior to initiation of syphilis treatment. Image D: Colonoscopy image showing resolution of colitis post-treatment of syphilis. Image E: Showing inflammatory changes of the rectum consistent with colitis. Image F: Staining positive for syphilis of rectum biopsy. Images G/H/I: CT abdomen and pelvis showing hepatic steatosis with normal caliber of the biliary system, focal moderate wall thickening of the rectum, multiple enlarged perirectal adenopathy concerning for rectal mass or carcinoma, and mild inflammatory infiltration around the rectum suggesting superimposed proctitis.

Table 1. Laboratory Values

Blood Chemistry	Value	Reference Range
Sodium	129	136 - 145 mmol/L
Chloride	94	90 - 110 mmol/L
Aspartate Transaminase (AST)	397	10 - 36 U/L
Alanine Transaminase (ALT)	224	6 - 46 U/L
Alkaline Phosphatase (ALP)	889	33 - 130 U/L
Total Bilirubin	5.7	0.2-1.2 mg/dL
Albumin	3.1	3.6 - 5.1 g/dL
Gamma GT (GGT)	1170	3 - 85 U/L
White blood cell (WBC)	6.60	4.40 - 11.0 10*3/uL
Hemoglobin	15.1	13.5 - 17.5 g/dL
Hematocrit	44.7	38.8 - 50.0%
Platelets	350	150 - 450 10*3/uL
Actin Smooth Muscle Antibody (ASMA)	15	0 - 19 units
Anti-Mitochondrial Antibody (AMA)	23.7	Negative: 0.0 - 20 units Equivocal: 20.1 - 24.9 units Positive: >24.9 units
Anti-Nuclear Antibody (ANA)	Negative	Negative
Immunoglobuin (IgG)	1220	767 - 1590 mg/dL
Perinuclear (p-ANCA)	< 1:20	Negative: < 1:20
Carbohydrate Antigen 19-9 (CA19-9)	125.2	0.0 - 34.0 U/mL
Carcinoembryonic Antigen (CEA)	3.0	0.0 - 3.0 ng/mL
Rapid Plasma Reagin (RPR)	Reactive	Non-reactive
RPR titer	1:4	None
Hepatitis A Total Antibody	Reactive	Non-reactive
Hepatitis A IgM Antibody	Non-reactive	Non-reactive
Hepatitis B Surface Antigen	Non-reactive	Non-reactive, equivocal
Hepatitis B Core IgM	Non-reactive	Non-reactive
Hepatitis B Surface Antibody	Reactive	Non-reactive
Hepatitis C Antibody	Non-reactive	Non-reactive
HIV 1/2 Antibody	Non-reactive	Non-reactive

S2140

To Be Colorectal or Not to Be? That Is the Question

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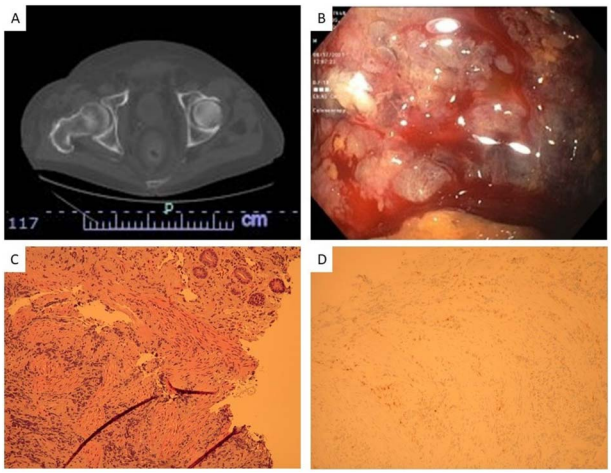
Introduction: Among the elderly, large bowel obstruction is often caused by colorectal cancer. Because prostate cancer is usually slow-growing, it can be asymptomatic and initially be missed, resulting in insidious disease progression.[1] Infrequently, prostate cancer can involve the rectum, leading to diagnostic challenges.
Case Description/Methods: A 72-year-old male presented with new-onset lower abdominal pain and constipation, with his last bowel movement occurring 2 weeks prior. Previous bowel movements were described as small caliber, black, and blood-streaked. During the past 6 months, he experienced an 80-pound unintentional weight loss, which was unsuccessfully treated with appetite stimulants. He also had hematuria. Pertinent physical exam findings included mild lower abdominal tenderness. Past medical history was significant for metastatic prostate cancer managed with abiraterone acetate, prednisone, and megestrol. Surgical history revealed prostatectomy. Computer tomography displayed mild periaortic retroperitoneal lymph node involvement and sclerotic bony foci of the ribs, thoracolumbar vertebral bodies, and the lower pelvis suspicious for carcinomatosis. Circumferential thickening of the rectum was also appreciated (Figure A). The patient could not be prepped because the nurse was unable to place an enema in the rectum due to pain. Digital rectal exam was performed, which revealed hard stool in the rectal vault requiring disimpaction. Subsequent endoscopy found abnormal rectal mucosa below the first valve of Huston (Figure B) and hard stools in the rectum and sigmoid colon. Pathological examination of the rectal biopsies revealed fibrotic stroma with areas of ulceration that were positive for AE1/AE3 and PSA and negative for CMV, CDX-2, synaptophysin, and CD56 with a KiH7 index greater than 90%, suggestive of prostatic origin (Figures C and D). The patient elected to receive hospice care and expired shortly thereafter.
Discussion: Prostate cancer can invade the rectum through lymphatic involvement, through direct invasion, or rarely through seeding status post needle biopsy. Although rare, it is crucial to consider prostatic rectal metastases when seeing patients with new-onset gastrointestinal symptoms (e.g. obstruction or bleeding) and a history of advanced prostate cancer.



[2140] **Figure 1.** (A) depicts circumferential thickening of the rectum on CT and (B) a rectal ulcerative on colonoscopy. (C) H&E and (D) PSA immunohistochemical staining confirm the diagnosis of metastatic prostate cancer.

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S2141

Systemic Mastocytosis Presented as Subtle Colonic Mucosa Change

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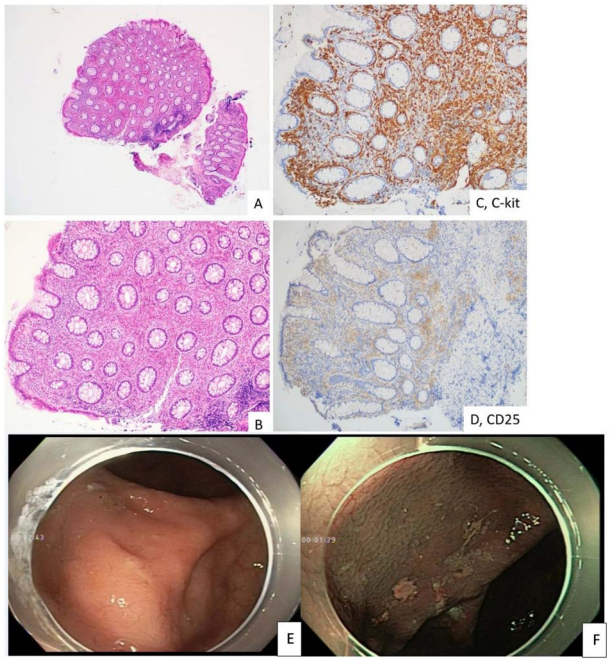
Introduction: Mastocytosis is a rare disease that result from clonal proliferation of abnormal mast cells in various organ systems including skin, liver, lymph nodes, spleen, bone marrow, and mucosal surfaces. Gastrointestinal (GI) involvement occurs in about 14-85% of the cases. Here, we report a case of indolent systemic mastocytosis presented as subtle colonic mucosa nodularity.
Case Description/Methods: A 69-year-old White woman with PMH of Stage IIB ovary low grade serous carcinoma s/p chemotherapy in remission presented for surveillance colonoscopy due to history of colon polyps. Cecum revealed nodularity change found in cecum and sigmoid colon. Biopsies were performed and showed atypical mast cell proliferation. The patient was reassessed but denied allergy history, or any GI symptoms. Previous colonoscopy did not show mast cell disease. She was referred to hematology for bone marrow biopsy. Labs including CBC with differential were normal but tryptase level was 26.7 (normal range < 11.5). Bone marrow biopsy and cytogenetic analysis revealed no clonal chromosome abnormalities, normal karyotype, hypercellular marrow with maturing trilineage hematopoiesis, and polytopic B-cells. Histopathology showed increased response to C-kit and CD25, concerning for systemic mastocytosis. Patient lacks systemic involvement, and her disease would be considered indolent, thereby only requiring surveillance at this time (Figure).
Discussion: Mastocytosis is a rare disease that affects approximately 1 in 10,000 people in the United States. It is defined as an abnormal increase in mast cells and can present in many ways. Cutaneous mastocytosis is limited to the skin while systemic mastocytosis infiltrates the bone marrow and other organ systems including GI tract. Common GI symptoms include nausea, vomit, abdominal pain, diarrhea. Diagnosis of mastocytosis is based on Word Health Organization criteria (Table). It requires bone marrow biopsy and biopsies of affected organs with dense infiltrates of mast cells. Elevated serum tryptase >20, KIT mutation, presence of CD2 and/or CD25 would support the diagnosis. Treatment depends on the severity of the disease. Severe systemic mastocytosis or mast cell leukemia may require chemotherapy or stem cell transplant. But indolent mastocytosis, as in our case, requires routine surveillance with CBC with differential, liver enzymes, immunoglobulin levels, and DEXA scan. Our case highlights the importance of sampling subtle abnormal GI mucosal findings during the procedures.



[2141] **Figure 1.** A-B: Biopsy of both polyps showed polypoid colonic mucosa with a lamina propria expanded by atypical clusters of spindled mast cells and prominent background eosinophilia. C: Immunohistochemistry for C-kit/CD117 confirmed a marked increase in clustered and spindled mast cells. D: CD25 was also positive in the mast cells, a marker typically positive in systemic mastocytosis. E: Cecal picture with very subtle nodularity change. F: NBI picture of nodularity change in cecum.

S2142

The Importance of Suspecting Intussusception as a Cause of Adult Bowel Obstruction

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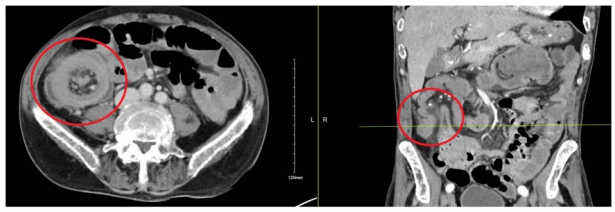
Introduction: Adult intussusception is rare, accounting for 5% of all cases of intussusception, and 1%-5% of all intestinal obstruction. It is mostly idiopathic in children, but in adults, up to 90% are secondary to a pathologic process. We present a case of an elderly man who presented with bowel obstruction as a result of intussusception due to colonic adenocarcinoma.
Case Description/Methods: A 73-year-old man presented with hypotension and tachycardia after large volume melena, and 4 days of colicky abdominal pain, anorexia and vomiting. He has a history of ESRD, multiple myeloma and GERD. Blood pressure was 97/64 mmHg & pulse was 123. He was pale, dehydrated, and had a distended, diffusely tender abdomen, without masses or guarding. Rectal exam revealed melanotic stool without masses. His hemoglobin was 8.1, lactate 2.7, and chest XRAY was normal. Patient was stabilized, GI was consulted, and he was admitted for hypotension due to massive GI bleed. Abdominal CTA showed bowel within bowel configuration, consistent with colonic/ileocolic intussusception from the hepatic to splenic flexure, with mesenteric bleeding inside the bowel loop, and fat stranding. Surgery emergently performed laparotomy, finding intussusception from cecum to transverse colon, with a cecal mass as the lead point. Mass resection and right hemicolectomy were done, after which he had a brief ICU stay and was eventually discharged. Pathology revealed a 3.7 cm well-differentiated adenocarcinoma with submucosal invasion (Figure).
Discussion: Intussusception is the telescoping of a segment of bowel into the lumen of adjacent distal bowel. In children, it usually presents with cramping abdominal pain, bloody diarrhea and a palpable mass. In adults 19 - 90 yrs however, it may present atypically, and is a completely distinct entity, warranting a greater degree of attention, as it is commonly caused by tumors, ~50% of which are malignant, most commonly primary colonic adenocarcinoma, followed by carcinoids, sarcomas and metastasis. Our patient presented with obstructive symptoms and rectal bleeding, which can be due to any form of bowel obstruction, making the suspicion of intussusception challenging, and often overlooked. It can be diagnosed with 58-100% accuracy with abdominal CT, and usually requires surgical treatment. Despite its rarity, intussusception should always be considered as a cause of bowel obstruction in adults, regardless of rectal bleeding, as it is significantly associated with cancer.



[2142] **Figure 1.** CT abdomen showing ileocecal intussusception with classic target sign on axial view (right), and bowel within bowel configuration on coronal view (right).

S2143

The Gang's All Here: A Rare Case of Polypoid Ganglioneuroma of the Colon

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Introduction: Ganglioneuromas are rare benign growths characterized by proliferation of nerve ganglion cells, nerve fibers & supporting cells of the nervous system. These growths have mostly been described in children but occur in adults as well. They are usually found in the mediastinum, retroperitoneum and adrenal glands but rarely, they occur in the gastrointestinal tract. Clinical manifestations depend on the location and size but can include abdominal pain, constipation, bleeding or obstruction. There are no known modifiable risk factors, but in some cases, they are associated with rare genetic syndromes like Cowden, Juvenile Polyposis and Peutz-Jeghers. Herein, we report a rare case of an isolated cecal ganglioneuroma.
Case Description/Methods: Our patient was a 63-year-old female with no pertinent past medical history who presented for a routine screening colonoscopy. She had normal vital signs and no abnormal laboratory findings. During the colonoscopy, cold forceps polypectomy was performed to retrieve 2 3-mm polyps in the ascending colon and one 2 mm polyp from the cecum. Hematoxylin and eosin staining of

the cecal polyp revealed evidence of spindle cell proliferation accompanied by large cells with prominent nucleoli, consistent with ganglion cells. The immunostaining of the cecal polyp was reactive for the S100 protein but was negative for markers of stromal tissue (CD34, CD117, smooth muscle actin, desmin, epithelial membrane antigen). The concurrence of these findings was consistent with a diagnosis of polypoid ganglioneuroma (Table).

Discussion: Colonic ganglioneuromas are divided into 3 major groups: polypoid ganglioneuromas, ganglioneuromatous polyposis & diffuse ganglioneuromatosis. Most of these tumors are found incidentally on screening colonoscopy. Though most of these tumors are benign, few reports have noted an associated incidence of colorectal cancer. Genetic testing is advised if there is existence of a genetic syndrome. There is a lack of guidelines regarding best practice management of these tumors as well as lack of consensus regarding screening measures & follow up surveillance colonoscopy for recurrence. However, similar to other cases reported in the literature that have been successfully treated with polypectomy, the tumor in our case was excised safely endoscopically. Thus endoscopic resection can be a curative method for solitary ganglioneuromas. We believe that awareness & proper counseling will translate into better care of patients with such tumors.

Table 1. Classification of colonic ganglioneuromas with identifying features

1. Polypoid ganglioneuroma	- small (< 2cm) & solitary - sessile or pedunculated
2. Ganglioneuromatous polyposis	- numerous (often 20-40) - sessile or pedunculated
3. Diffuse ganglioneuromatosis	- can range from 1-17 cm in size - present as disseminated, nodular, intramural or transmural lesions

S2144

The Signet-Cell Recurrence: Delayed and Unusual

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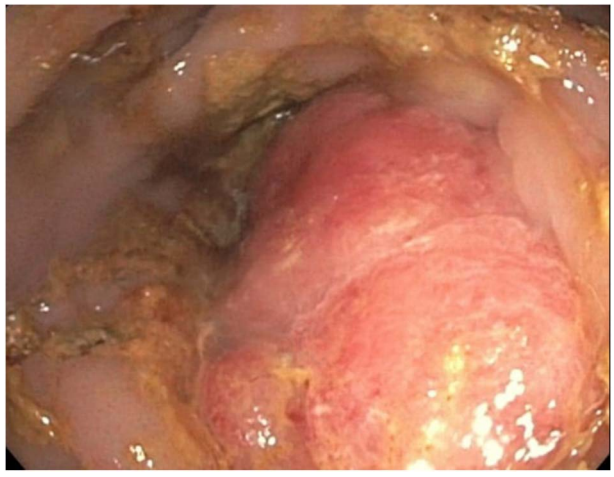
Introduction: Metastases to the colon from gastric signet ring cell carcinoma (SRCC) are unusual and can manifest as polyps, ulcerations, depressed lesions, and strictures. Here, we present a rare case of gastric SRCC with metastasis to the rectum, 5 years after initial diagnosis and treatment.

Case Description/Methods: A 41-year-old man was seen in the Gastroenterology clinic to evaluate hematochezia, altered bowel function, and weight loss for 2 months. The patient was diagnosed with gastric adenocarcinoma (SRCC) 5 years earlier and underwent distal gastrectomy and adjuvant CXRT. Post-treatment EGDs were reportedly normal. Colonoscopy revealed a non- traversable, friable, and malignant-appearing lesion in the proximal rectum, 10 cm from the anal verge. Biopsies from the rectal lesion showed poorly differentiated, invasive adenocarcinoma with signet ring cells, likely metastasis from primary gastric adenocarcinoma. The patient was subsequently referred to medical and surgical oncology (Figure).

Discussion: Metastases to the colon are rare with a high-frequency primary being the stomach. In cases of metastases to the colon, the morphological type of the metastatic region is mostly the infiltrating type of poorly differentiated or undifferentiated adenocarcinoma with lymph and blood vessel invasion and are notorious to have a poor prognosis with high recurrence rates. They are often misdiagnosed as Inflammatory bowel diseases causing a delay in management. Usually, finding these colon lesions prompts investigation of the primary lesion, unlike our case here. After an extensive literature review, we have not found a case where SRCC rectal metastasis was found 5 years after the primary gastric SRCC diagnosis for which the patient was treated. Given the rarity of such presentation, this case helps increase physicians' knowledge about the different ways gastric SRCC can metastasize that can occur after prolonged treatment.



[2144] **Figure 1.** Rectal mass (metastasis).

S2145

The Great Imitator Hiding in Plain Sight

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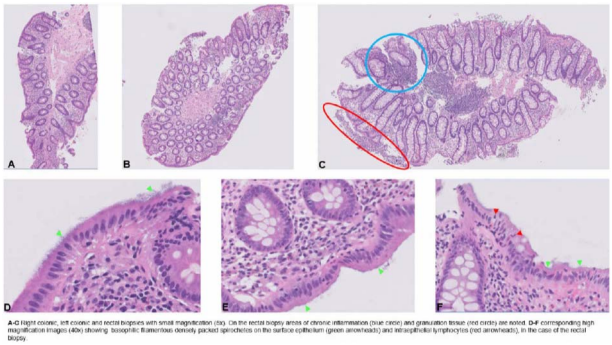
Introduction: Lower gastrointestinal syphilis is a rare manifestation of early syphilis transmitted through anal contact. It usually occurs in men and transwomen who have sex with men. It can present with symptoms of proctitis including hematochezia, mucous discharge, and tenesmus, and can mimic inflammatory bowel disease (IBD). We present a case of intestinal syphilis in an HIV patient who presented with fevers and bloody diarrhea found to have intestinal spirochetosis. This case report adds to the importance of including STI colitis in the differential when presented with high-risk patients with lower gastrointestinal features.

Case Description/Methods: A 32-year-old male with a history of untreated HIV, untreated hepatitis C, and IV drug use presented to the emergency department with a one-month history of worsening sharp and diffuse abdominal pain, subjective fevers, and blood-tinged mucoid bowel movements. He was diagnosed with rectal gonorrhea and chlamydia infection a few days prior to presentation and was treated with intramuscular ceftriaxone. He was discharged on doxycycline, which he failed to take. The patient's social history is significant for being a sex worker and having sex with males. On physical exam, he was cachectic appearing with a diffusely tender abdomen. A rectal exam revealed palpable nodules and anal condylomas. He was treated with HAART and doxycycline for a presumed lymphogranuloma venereum infection. Computed Tomography (CT) of the abdomen pelvis showed an irregular and thick-walled rectum with perirectal soft-tissue stranding and necrotic nodes in the left perirectal region, the largest measuring 1.7 x 1.7 cm. Given continuous bloody bowel movements and a family history of colorectal cancer, a colonoscopy was obtained and showed scattered and patchy severe edema, erythema, and friability with shallow and deep rectal ulcerations. His labs revealed late latent syphilis infection (1:128 titer) and he was started on penicillin (PCN). Pathology of the colon later revealed intestinal syphilis as depicted in the Figure.

Discussion: In recent years, there has been an increase in the number of reported cases of syphilis, especially in men and transwomen who have sex with men. Given this rare manifestation of syphilis, it is important to recognize and effectively treat to reduce patient morbidity and minimize community spread. Our case demonstrated the importance of maintaining a high level of suspicion for high-risk individuals presenting with lower gastrointestinal symptoms.



[2145] **Figure 1.** Right colon (Specimen A), left colon (Specimen B), and rectum (Specimen C).

S2146

To Remove or Not to Remove? A Case of Appendiceal Inversion and Its Diagnostic Challenges

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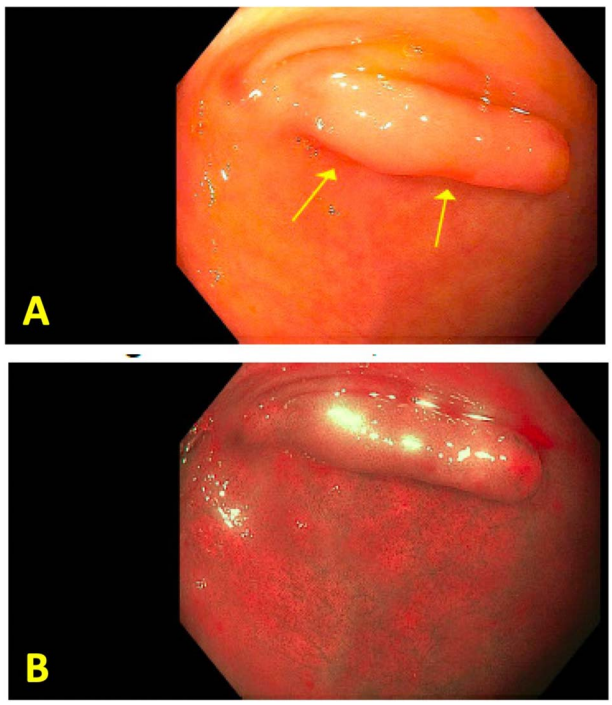
Introduction: Appendiceal inversion occurs when the appendix is pulled into the lumen of the cecum, and can be an uncommon incidental finding on colonoscopy. When found, they may present as a diagnostic challenge to the endoscopist, as they may be mistaken as a colon polyp or even a neoplasm due to its appearance.
Case Description/Methods: A 75-year-old woman with a history of hysterectomy, hypertension, and reported hemorrhoids presented to gastroenterology clinic for evaluation after being found to have a positive Cologuard test. She subsequently underwent colonoscopy, where she was found to have a large polypoid lesion protruding from the appendiceal orifice. Biopsies of the lesion revealed normal mucosa. Given the concerning appearance of the lesion despite normal biopsies, the patient was referred for repeat colonoscopy for endoscopic removal. Repeat endoscopy re-demonstrated a 5 by 10 millimeter non-bleeding, non-ulcerated, finger-like projection from the appendiceal orifice. Normal appearing mucosa of the lesion and its surroundings was observed under narrow band imaging. These findings were suggestive of an appendiceal inversion. The decision was made to not remove the lesion. The patient subsequently underwent CT imaging, where no significant underlying pathology was identified (Figure).
Discussion: At present, there are no definitive guidelines on the workup of suspected appendiceal inversions. Appendiceal inversion may occur iatrogenically after open appendectomy or they may be congenital. These are benign causes that would not require further intervention. However, they may be associated with conditions including endometriosis, adenomas, and neoplasms. Anecdotally, there have been reports of peritonitis or significant bleeding with removal of these lesions. A careful approach is thus imperative to prevent unnecessary complications. A thorough surgical history should be taken as history of prior open appendectomy may increase suspicion for appendiceal inversion. Endoscopically, evaluation for surrounding inflammation and use of narrow band imaging to identify abnormal mucosa should be considered. Biopsy of the lesion may also be considered, but should be performed with caution. CT imaging may help exclude any underlying malignancy. Prior case reports have reported identification of mucinous neoplasms on CT following colonoscopy if the lesion cannot be determined to be an appendiceal inversion on endoscopy. In this patient, CT did not reveal any underlying malignancy.



[2146] **Figure 1.** Endoscopic appearance of an appendiceal inversion both under normal white light endoscopy (A) and narrow band imaging (B).

S2147

That's a Lot of Air! a Case of Incidental Pneumatosis Intestinalis

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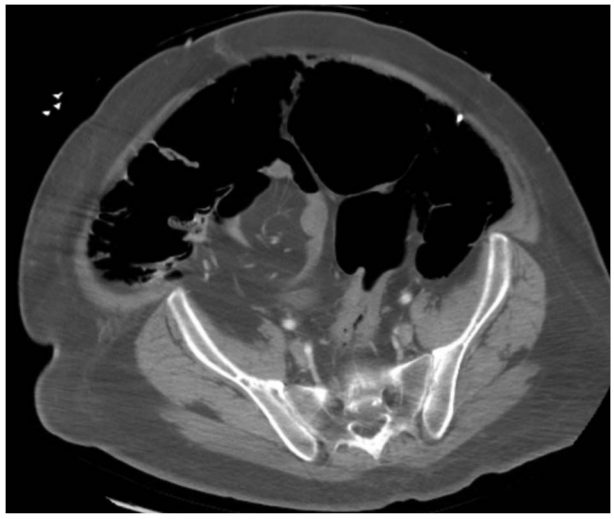
Introduction: Pneumatosis cystoides intestinalis (PCI) is a rare condition characterized by the presence of gaseous cysts in the submucosa and subserosa of the gastrointestinal tract with an incidence of 0.03%. Common causes include pulmonary disease, chemotherapy, ileal surgeries or bowel obstruction with rare causes linked to lactulose or sorbitol-containing compounds. Management is usually conservative after excluding emergent surgical causes like bowel ischemia or bleeding. We describe a case of PCI found incidentally on imaging in a male with cerebral palsy.
Case Description/Methods: A 24-year-old male with an extensive medical history notable for cerebral palsy, epilepsy, tracheostomy and gastrostomy dependence and recurrent small bowel obstructions, presented for evaluation after an outpatient computed tomography (CT) chest demonstrated extensive pneumatosis involving the imaged transverse colon. On review, the patient had a history of abdominal distention and intermittent alternating constipation and liquid stools. Physical examination revealed abdominal distention without tenderness or stool in the rectal vault. Workup revealed normal complete blood count, metabolic profile and lactic acid. CT of the abdomen showed extensive pneumatosis involving the colon **(Figure)**. Considering that the patient had no signs of acute abdomen, he was managed conservatively with gastric decompression. Care was taken to avoid hypoxia and hypotension. Serial abdominal exams and X rays showed improvement and he was restarted on tube feeds which he tolerated well and was discharged home. A few days later, he presented with hematochezia and repeat CT abdomen redemonstrated colonic pneumatosis, however now with new free air. He was managed conservatively again with colonic decompression and slow introduction of feeds and was stable for discharge.
Discussion: Pneumatosis cytoides intestinalis is an uncommon condition that can present from asymptomatic abdominal distention to diarrhea and hematochezia. In our case, the proposed mechanism could be related to recurrent bowel obstructions, pulmonary disease or the sorbitol content of his anti-seizure medications. Management is usually conservative with surgery reserved for toxic patients and hyperbaric oxygen used in select patients. Although this patient had hematochezia, he was able to be managed conservatively without surgery. Therefore, in most patients, despite concerning features, PCI may be appropriately managed without surgical intervention.



[2147] **Figure 1.** Diffuse Colonic Pneumatosis and Dilatation.

S2148

The Pneumoperitoneum Mimicker

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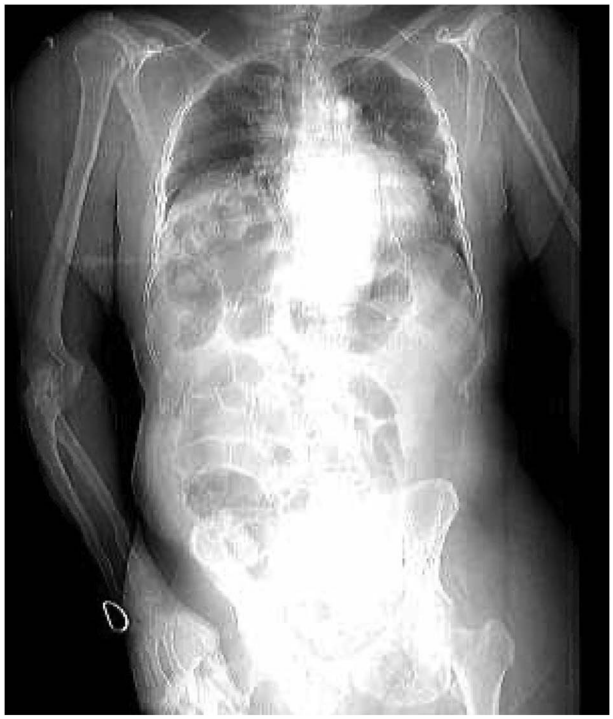
[1]University of Puerto Rico, Medical Sciences Campus, San Juan, Puerto Rico; [2]VA Caribbean Health Care System, San Juan, Puerto Rico; [3]University of Puerto Rico School of Medicine, San Juan, Puerto Rico; [4]University of Puerto Rico, University District Hospital, San Juan, Puerto Rico.

Introduction: Chilaiditi's Sign refers to a radiological finding of colonic interposition between the liver and the right diaphragm. This same finding when accompanied by symptoms is known as Chilaiditi's Syndrome, a rare disorder causing a broad array of gastrointestinal symptoms such as nausea, vomiting, abdominal pain and in the worst cases, bowel obstruction.
Case Description/Methods: This is the case of a 73-year-old male with a medical history of uncontrolled hypertension and dyslipidemia who presented to the emergency department with an intense frontotemporal headache, nausea, and vomiting that started during the morning. The patient was diagnosed with a hypertensive emergency with an intracerebral hemorrhage. The patient was evaluated by Neurosurgical Serviced who deemed no management, and the patient was subsequently admitted to the Medicine ward. During hospitalization, the patient's neurological deterioration progressively improved, but suddenly, the patient started to complain of generalized abdominal pain and nausea. The pain was accompanied by an increased respiratory rate, which prompted further imaging workup. Arterial blood gasses were remarkable for respiratory alkalosis. A portable chest x-ray revealed findings concerning air under the diaphragm as seen as intestinal perforation (pneumoperitoneum). Emergent abdominal CT was performed which surprisingly showed no evidence of bowel obstruction or perforation but was remarkable for interposition of the colon between the liver and right hemidiaphragm. Given imaging findings with associated symptoms, the patient was diagnosed with Chilaiditi's Syndrome (Figure).
Discussion: Chilaiditi's Syndrome is a rare disorder that can provoke abdominal pain, nausea, vomiting or bowel obstruction. In some cases, having Chilaiditi's has also been associated with breathing problems. Our case raises awareness of Chilaiditi's Syndrome as an important differential diagnosis of findings of air under the diaphragm since it may mimic pneumoperitoneum. Mistaking Chilaiditi's sign for pneumoperitoneum, can result in unnecessary surgery and morbidity.



[2148] **Figure 1.** Chilaiditi's sign.

S2149

Too Much of Gut Gives You Reflux

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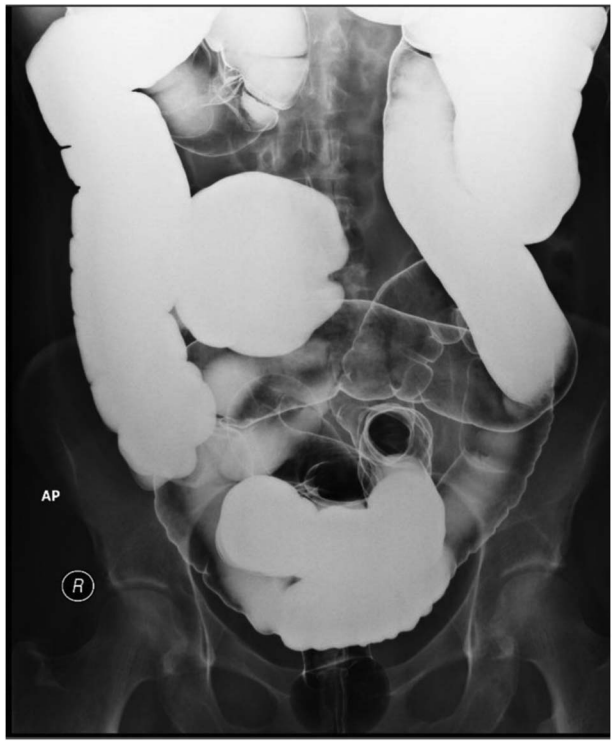
Introduction: Gastroesophageal reflux disease (GERD) is a very common disease that often presents with symptoms such as heartburn, dysphagia, odynophagia, chronic cough, asthma, belching and regurgitation. Common etiologies of GERD are- Transient lower esophageal sphincter(LES) relaxation, motility disorder, lower esophageal sphincter (LES) incompetence, short lower esophageal sphincter (< 2 to 5 cm) and increased intra-abdominal pressure due to obesity or pregnancy for example. Dolichocolon is an uncommon disease in which patients have redundant colon. It commonly presents with constipation, lower abdominal pain and in severe cases, volvulus. Dolichocolon is an unusual cause of GERD. We present an unusual presentation of an uncommon pathology.
Case Description/Methods: Our patient is 56-year-old woman presented with chronic cough and chronic abdominal pain. Initially patient was diagnosed with GERD. Fundoplication was planned since patient failed medical management. During workup, dolichocolon was discovered and after subtotal colectomy, the patient's symptoms of GERD resolved **(Figure)**.
Discussion: Dolichocolon is defined as redundant colon. We can use the following criteria to diagnose it.
- Sigmoid colon above the line between iliac crests.
- Transverse colon below the aforementioned line.
- Extra loops at the hepatic and splenic flexure.

If all of the aforementioned redundancies are present at the same time a fully developed Dolichocolon is diagnosed. The reason for the redundant sigmoid colon is thought to be the pathological elongation of the hindgut and hence subsequently the elongation of the sigmoid colon. Although Dolichocolon largely is due to congenital malformation, there are certain theories that abnormal fecal transport, loss of Cajal cells and dietary habits also play a role in acquired dolichocolon. The imaging modality of choice for diagnosis is Barium enema, although we could still use computerized tomography, colonic transit study or magnetic resonance imaging. Our proposed theory for the cause of patient's symptoms is that the redundant colon increasing pressure on the stomach and hence resulting in symptoms of GERD.
This case highlights the importance of Dolichocolon as a cause of abdominal complaints and presents an unusual presentation of a rare pathology.



[2149] **Figure 1.** Barium Enema demonstrating redundant colon.

S2150

Triangle of Lymphocytic Colitis, Epstein-Barr Virus, and Lymphoma: Is There Any Association?

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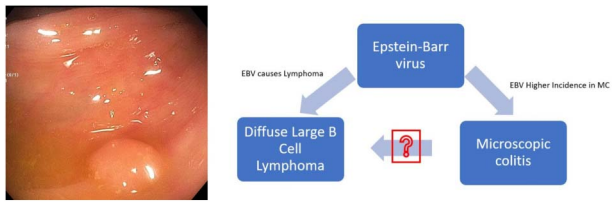
Introduction: Epstein–Barr virus (EBV), is linked to range of lymphoproliferative lesions and malignant lymphomas of B-, T- and NK-cell origin. EBV-positive diffuse large B cell lymphoma (DLBCL) not otherwise specified is a variant of DLBCL seen in patients without known immunodeficiency or prior lymphoma. In few reports EBV infection was more commonly detected in colonic mucosa of patients with Microscopic Colitis (MC), but it remains unclear if this translates to higher incidence of lymphoma in this subgroup of people. Here, we describe a case of DLBCL in patient with MC associated with EBV infection in context of recent findings.
Case Description/Methods: 77-year-old female with history of COPD, diabetes underwent colonoscopy for chronic diarrhea of 4-month duration. She suffered from 3-4 loose stools/day, and had normal celiac panel, fecal elastase, and infectious workup. Colonoscopy was unremarkable except for 4 mm Paris Is polyp in sigmoid colon removed with cold snare. On pathology, the random colon biopsies were positive for lymphocytic colitis along and polyp showed DLBCL (non-germinal center phenotype) along with positive EBV infection (Figure).
Discussion: It is widely believed that overall risk of malignancy is not increased in MC. However, theoretically MC should increase risk of lymphoma as it is more likely to be associated with oncogenic EBV than Ulcerative colitis or irritable bowel syndrome (90 % vs 66 % vs 0 % respectively). EBV increases the risk of lymphoma due to protein expression in transformed infected lymphocytes that results in immune evasion and suppression of apoptosis. Earlier studies have shown no evidence of higher risk of lymphoma in MC, however recently Bergman et al. (2021) analyzed data from Sweden´s pathology departments and from the Swedish Cancer Register and included 11758 patients with incident MC and found an increased risk of lymphoma (adjusted HR 1.43 [1.06–1.92]). Studies are needed to explore risk of lymphoma in subgroup of MC patients with EBV infection as inflammation cause by MC and concomitant EBV infection enhance the overall malignant potential. In conclusion, MC may not be as benign entity as it was once thought to be as it is more likely to harbor oncogenic EBV virus. Even diminutive polyps in MC can potentially harbor lymphoma and should be removed and submitted for analysis rather than being discarded.



[2150] **Figure 1.** Colonoscopy image showing small polyp (left) and schematic (right) of triangle between CMV, microscopic colitis and lymphoma error.

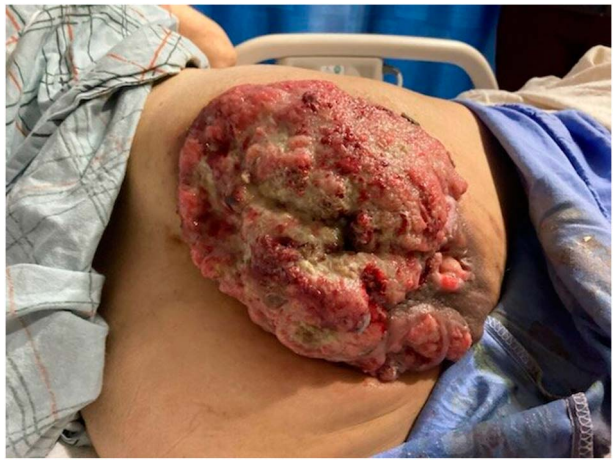
S2151

Unusual Presentation of Cancer of Unknown Primary Origin

Fareeha Abid, MD[1], Onyeka O. Nwachukwu, MD[2], Qirat Jawed, MBBS, MD[1], Pallavi Pokharel[3], Ana Lucia Romero, MD[3], Hasham Saeed, MBBS, MD[3], Muhammad Noori, MD[1], Michelle Cholankeril, MD[1].
[1]Trinitas Regional Medical Center, Elizabeth, NJ; [2]Rutgers Health/Trinitas Regional America Center, Elizabeth, NJ; [3]RWJBarnabas Health/Trinitas Regional Medical Center, Elizabeth, NJ.

Introduction: Colorectal cancer (CRC) is the fourth most diagnosed cancer in the world (1) with an overall lifetime risk of 4.3% for men and 4% for women (2). Adenocarcinomas account for 96% of all CRC (3), while Perianal adenocarcinomas account for 2-3% of all gastrointestinal malignancies (4), usually originating from perianal abscesses and Fistula in Ano. Here we present an unusual case of a 74-year-old man who presented with a right gluteal lesion and was found to have moderately differentiated adenocarcinoma on punch biopsy with immunochemistry (IHC) suggestive of colorectal origin. However, lesion in the colon was not identified.

Case Description/Methods: The patient is a 74-year-old man with a past medical history of Crohn's disease with recurrent perianal fistulas and abscesses who presented with a progressively increasing right gluteal lesion for the past 2 years. Physical examination revealed a large fungating friable mass extending over the entire right buttock area, with yellow foul-smelling slough and serosanguineous discharge. Laboratory workup revealed leucocytosis, microcytic anaemia, and elevated carcinoembryonic antigen (CEA) levels. An MRI of the pelvis revealed a 9.8 x 16.1 x 7.7 cm heterogenous mass inseparable from the posterior aspect of the anus and along the course of a previously seen perianal fistula. Histopathology of a punch biopsy of the mass was consistent with moderately differentiated adenocarcinoma, and IHC was suggestive of colorectal origin. Astonishingly, a luminal tumor was not identified on colonoscopy (Figure).
Discussion: Cancer of unknown primary (CUP) is a relatively rare clinical entity and their ability to metastasis prior to formation of a clinically identifiable primary is a diagnostic challenge. Although imaging such as CT and PET scans are helpful, light microscopic examination of initial biopsy is the most important clue towards the organ/site of origin. Peculiar findings should prompt IHC as highlighted in this unusual case.



[2151] **Figure 1.** Gross appearance of tumor.

S2152

Utilization of Upper Gastrointestinal Fecal Microbiota Transplant in Fulminant *Clostridioides difficile* Colitis

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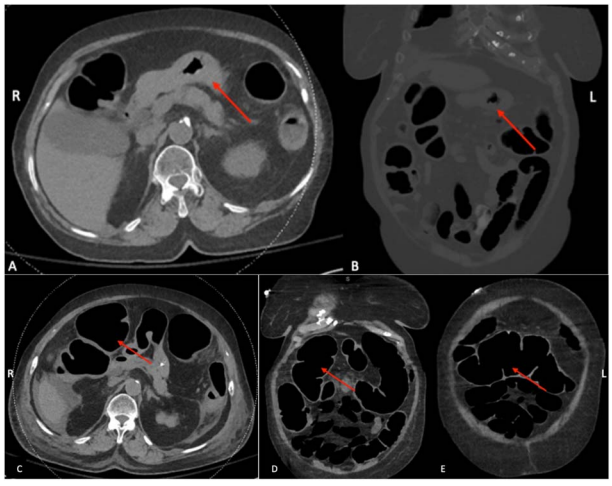
Introduction: *Clostridioides difficile* colitis is an antibiotic-related infection of the gut that is estimated to cause approximately half a million infections in the United States. The role of fecal microbiota transplant (FMT) in the treatment of *C. difficile* is unclear. However, FMT is currently recommended for patients with severe and fulminant C. diff infections that are unresponsive to antibiotic therapy in patients who are non-surgical candidates. FMT is preferably administered rectally as this is associated with higher cure rates than delivery via the upper gastrointestinal tract.
Case Description/Methods: We report a case of a previously healthy 93-year-old female, with no recent exposure to antibiotics, who presented with intermittent fevers, loose stools, and generalized abdominal pain. Initial blood work revealed leukocytosis, elevated creatinine, and elevated inflammatory markers. Initial imaging studies showed evidence of severe diffuse colitis. She was found to be C. *difficile* positive and initially treated with oral vancomycin. Rectal vancomycin and intravenous metronidazole were added in conjunction after she continued to deteriorate clinically. Her hospital course was complicated by poor oral intake, ileus, toxic megacolon, and severe deconditioning. FMT was considered in this patient, although she was not a candidate for rectal or oral delivery due to the high risk of colon perforation and high aspiration risk, respectively. We pursued FMT via nasojejunal tube (NJT). We took measures including ensuring a deep insertion of the NJT, stopping all antibiotics for 48 hours before FMT, and utilization of a proton pump inhibitor and a pro-kinetic agent at the time of FMT, to maximize the chances of a positive outcome. Since undergoing FMT, the patient, initially critically ill, has had a significant improvement in her symptoms and has returned to her baseline clinical and functional status (Figure).
Discussion: *C. difficile* is one of the most common nosocomial infections among hospitalized patients. Alternative approaches, such as surgical resection or FMT, may be utilized in cases that are refractory to antibiotic therapies. Although evidence supporting FMT is limited, delivery of FMT via the upper gastrointestinal tract is not recommended due to lower efficacy. We utilized FMT via NJT in this patient given her high risk for surgery, perforation, and aspiration. However, we took measures to attempt to improve the efficacy of FMT and believe these steps increased the patient's chances of a positive outcome.



[2152] **Figure 1.** (A-B) Non-contrast CT abdomen and pelvis done upon initial presentation showing findings suggestive of bowel wall thickening in the ascending colon and cecum concerning for colitis in axial (A) and coronal (B) planes. (C-E) Repeat non-contrast CT abdomen/pelvis in axial (C) and sagittal (D, E) planes which showed increase in colonic distention within the transverse colon measuring up to 7cm (C, E) and increased distention within the cecum and ascending colon (D) concerning for toxic megacolon.

S2153

Two Cases of Lipoma Associated Colo-Colonic Intussusception

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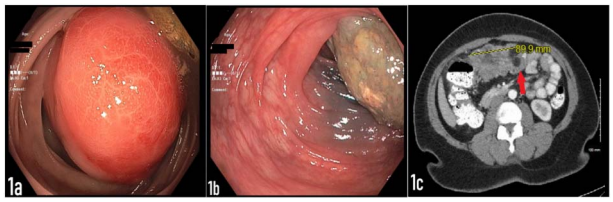
Introduction: Intussusception in adults is a rare condition. In the pediatric population, 90% of cases are idiopathic, while lead point represents 70-90% of cases in adults. Colo-colonic intussusception (CCI) is most often caused by malignant lead point. We present 2 cases of CCI caused by large submucosal lipomas.
Case Description/Methods: Case 1: A 61-year-old male presented with a 3-month history of intermittent hematochezia. Initial exam and laboratory studies were unremarkable. CT abdomen/pelvis revealed a 6.7 x 4.2 cm fatty mass near the ileocecal valve area. Colonoscopy confirmed a 6 cm polypoid subepithelial mass near the ileocecal valve [Figure a], with findings suggestive of intussusception. Biopsy of the polyp suggested a hyperplastic polyp. Ultimately, given the persistence of symptoms and mass size, laparoscopic right colectomy was performed. Resected mass was consistent with submucosal lipoma. Case 2: A 48-year-old female was being evaluated for acute intermittent crampy abdominal pain. The pain was episodic, lasting approximately 15-20 minutes, and diffuse throughout the abdomen. Episodes were self-limited. The patient also endorsed loose stools but otherwise without blood. Laboratory work was unremarkable. CT abdomen/pelvis revealed a 4.5 cm fatty mass within the proximal transverse colon with features suggesting intussusception [Figure c]. Colonoscopy revealed a 5 cm fungating necrotic mass [Figure b]; unfortunately, tissue biopsy was nondiagnostic. The patient was initially reluctant to undergo operative management; however, after 5 months of sporadic abdominal cramping, was ultimately amenable for right hemicolectomy, which was curative. Pathology of resected mass was consistent with submucosal lipoma.
Discussion: Adult CCI is a rare pathology with a predilection in women between the ages of 40 and 70. Symptoms of intussusception are non-specific and can include intermittent abdominal pain with tenderness, constipation, and rectal bleeding. Laboratory tests are non-specific and normal in most cases. Diagnosing CCI can be readily made with CT imaging or colonoscopy. Lipomas implicated in this condition are often greater than 4cm in size, with the transverse colon being the most common site. Despite the benign nature of these tumors, when implicated in intussusception, morbidity is high as most patients require colectomies. Both cases highlight differences in symptomatology with this disease.



[2153] **Figure 1.** a) Colonoscopy demonstrated a large 6 cm polypoid subepithelial lesion in the proximal ascending colon about 6 cm distal to the ileocecal valve. b) Colonoscopy demonstrated a large 5 cm fungating, partially obstructing polypoid mass in the transverse colon. c) CT abdomen/pelvis showing a roughly 4.5 cm submucosal lipoma (red arrow), the leading point of an 8.9 cm long colo-colonic intussusception (yellow line).

S2154

Utilizing the Mobile Pure-Vu System for Bedside Inpatient Colonoscopy: A Novel Technique

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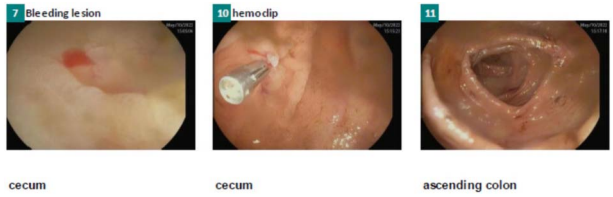
Introduction: Colonoscopy is considered the standard for evaluating patients with suspected colonic disease. A key factor in ensuring high quality colonoscopy is adequate colon cleansing. Unfortunately, in hospitalized patients, bowel preparation is often challenging and bowel cleansing is often due to patient's inability to tolerate the preparation, slow bowel transit in the setting of immobilization and acute illnesses, and due to the use of motility-altering medications. Poor bowel preparation limits visualization of the colonic mucosa and this can lead to incomplete colonoscopies, missed pathology, adverse events, prolonged hospital stays and increased costs. Due to this recurrent problem, new technologies have been developed to improve bowel preparations intra-procedurally. One of those is the Pure-Vu EVS system, which is an over-the-scope irrigation and cleansing device. This case report describes the first use of the Pure-Vu EVS system for mobile bedside colonoscopy in an intensive care setting.
Case Description/Methods: A 63-year-old Black male with a past medical history of cerebral vascular disease, hypertension, diabetes and chronic kidney disease presented from his rehabilitation facility with reported melena. The patient was found to be hypotensive and determined to be in hemorrhagic shock. The patient was admitted to the intensive care unit, initiated on pressors and administered colloids. The patient then underwent urgent bedside esophagogastroduodenoscopy which revealed no source of bleeding. A CAT scan was obtained which demonstrated no targeted source of bleeding for interventional radiology. The patient was then administered 2 liters of Polyethylene Glycol 3350 and underwent same day bedside colonoscopy. A Motus GI Pure-Vu EVS system was loaded onto a colonoscope and the colon was cleansed from a Boston bowel prep score of 4 to 8. An actively bleeding angioectasia was identified in the cecum and hemostasis was achieved with a hemoclip. The patients shock resolved and the bleeding ceased (Figure).
Discussion: The newest version of Pure-Vu EVS is more compact and readily transportable. It's design makes it ideal for utilization in mobile colonoscopy cases. This case illustrates the potential benefits of utilizing the Pure-Vu EVS system in mobile endoscopy cart and the potential to improve outcomes such as Boston Bowel prep score, rates of diagnosis, adenoma detection rates and ability to achieve hemostasis. Trials are currently underway examining this potential.



[2154] **Figure 1.** Angioectasia identified after bowel cleansing with Pure-Vu EVS.

S2155

Utilizing the Pure-Vu EVS for Inpatient Colonoscopy for Patients With an LVAD: A Case Report

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Introduction: Colonoscopy is considered the standard for colon cancer screening. A key factor in ensuring high quality colonoscopy is adequate colon cleansing. In hospitalized patients, bowel preparation is often challenging and inadequate cleansing is often due to patient's inability to tolerate the preparation, slow bowel transit in the setting of immobilization and acute illnesses, and the use of motility-altering medications. Poor bowel preparation limits visualization of the colonic mucosa and can lead to incomplete colonoscopies, missed pathology, adverse events, prolonged hospital stays and increased costs. New technologies have been developed to improve bowel preparations intra-procedurally. The Pure-Vu EVS system, which is an over-the-scope irrigation and cleansing device. This case report describes a novel use of the Pure-Vu EVS system to improve inpatient colonoscopy prep.

Case Description/Methods: A 58-year-old female with past medical history significant for chronic systolic heart failure, ischemic cardiomyopathy status post Left Ventricular Assist Device (LVAD) one year prior. End stage heart failure patients requiring LVAD placement routinely undergo screening colonoscopy as part of their pre-transplant evaluation, as the presence of colon cancer or advanced neoplasia could preclude heart transplantation. As part of orthotopic heart transplant evaluation she was admitted to the hospital for IV heparin bridging for screening colonoscopy. After admission, the patient was started on standard bowel prep consisting of 4L of Golytely and Dulcolax suppository. Despite completion of prep, she continued to pass sediments and prep was deemed inadequate. The patients LVAD anticoagulation had been held for the procedure and the decision was made to proceed with colonoscopy utilizing the Pure-Vu EVS device. During the procedure the clinical team utilized the Pure-Vu EVS device and performed the procedure with cardiovascular anesthesia. The Pure-Vu EVS system effectively irrigated and suctioned areas of inadequate bowel prep with sediment larger than 3.8 mm, allowing for improved visualization of the colonic mucosa.
Discussion: Pure-Vu EVS allowed for us to perform a screening colonoscopy as part of orthotopic heart transplant evaluation in a patient with LVAD admitted a hospital inpatient service for heparin bridge. This case report describes one of the first cases of the utilization of this unique technology in a patient requiring inpatient screening colonoscopy with advanced heart failure.

S2156

When the Pseudopolyps End up Deceiving You: Transitional Cell Cancer Masquerading as Inflammatory Bowel Disease

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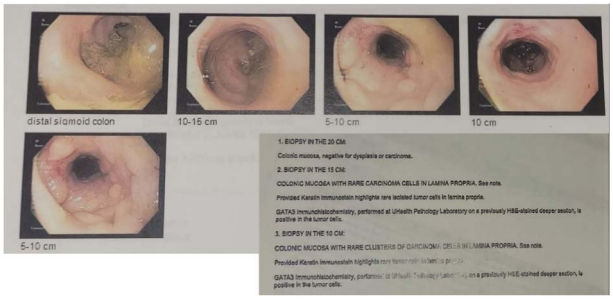
Introduction: Transitional Cell Carcinoma (TCC) is the most common type of bladder cancer, accounting for approximately 95% of all cases, and is the 4th most common cancer in men. Luckily, TCC generally has a good prognosis with the majority staying localized to the bladder. TCC colonic metastasis, while rare, has been documented – however, metastasis for this patient presented as a totally different disease. Case Description/Methods: A 88-year-old male with a history of bladder cancer and colon polyps came to the clinic for follow-up evaluation of proctitis, significant flatulence, tenesmus, and incontinence, after referral to a colorectal surgeon. The surgeon reported that anoscopy could not be completed due to significant rectal inflammation due to what appeared to be a stricture and recommended further evaluation for inflammatory bowel disease. A colonoscopy was conducted without complication and a diagnosis of indeterminate colitis, diverticulosis, sigmoid colon polyp, and proctitis was made. The 3 mm polyp was removed and sent to pathology as well as multiple biopsies taken 5cm from the anal verge to approximately 20 cm from the anus where the mucosa appeared edematous and friable. Pathology reported back with different diagnoses at different distances from the anus. Found at 5 cm from the anus was minimal focal active colitis and negative for atypia or malignancy. Found at 10 cm from the anus was mildly hyperplastic colonic mucosa and rare, atypical cells consistent with TCC in the lamina propria. Found at 15 cm from the anus was mildly hyperplastic colonic mucosa and rare, detached cells consistent with TCC in the lamina propria. Found at 20 cm from the anus was mildly hyperplastic colonic mucosa that was negative for colitis, atypia, and malignancy. The biopsies and results were sent to the for second opinion and were in concurrence with the initial interpretations (**Figure**).
Discussion: Based on the presenting symptoms and imaging this raised high suspicion for inflammatory bowel disease. But this case serves as a reminder that cancer can present in extremely unpredictable ways. It is crucial to confirm findings even when all leads are seemingly definitive for a common diagnosis. TCC with secondary rectal and colonic involvement can mimic inflammatory bowel disease with edema, nodularity, and stricturing.



[2156] **Figure 1.** A. Colonoscopy pictures B. Pathology Report.

S2157

Vibrio Species Infection Followed by New Onset Lymphocytic Colitis: Cause or Coincidence?

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Introduction: The pathophysiology and epidemiology of lymphocytic colitis (LC), a form of microscopic colitis, is not well understood. The incidence of this disorder in some populations has increased over time, nearing that of inflammatory bowel disease (IBD). Medications, autoimmune conditions, infectious etiologies, and genetics have been proposed as predisposing to or triggering LC. Of the reported bacterial pathogens, Vibrio species has not yet been linked to LC. We report a case of LC diagnosed post-infection with Vibrio spp.
Case Description/Methods: A 68-year-old male with a past medical history of Gilbert syndrome, remote tobacco use, GERD, anxiety and hyperlipidemia presented with 8-12 episodes daily of watery diarrhea for 16 days. The diarrhea, associated with fecal incontinence and abdominal cramping, began after consumption of raw clams and oysters. The patient's abdominal exam was without tenderness to palpation, masses, or organomegaly. Initial labs showed no leukocytosis and electrolytes were normal. Stool studies demonstrated a positive fecal leukocyte stain. A stool PCR was positive for Vibrio cholerae/parahaemolyticus. He was treated with tetracycline, though his symptoms did not completely relent. Repeat stool cultures were negative despite residual loose stools. Further workup included a negative stool C. Diff toxin and excluded celiac disease. Postinfectious IBD was suspected, and he was started on a FODMAP diet and dicyclomine. Despite reported compliance, his symptoms did not improve. Subsequent colonoscopy revealed a grossly normal ileum and colon. Colonic biopsies depicted colonic mucosa with mildly increased intraepithelial lymphocytes, consistent with LC. Treatment was initiated with oral budesonide and tapered. Diarrhea resolved after 2 weeks of treatment.
Discussion: The temporal nature of Vibrio spp. infection raises the question of causality of LC. H. Pylori, Yersinia, and C. Diff have been linked to collagenous colitis. Thus far, LC has only been linked to Campylobacter jejuni. Statins, PPIs, and SSRIs have also been associated with LC. PPI use may predispose to Vibrio infection due to hypochlorhydria. Consideration of post-infectious IBD and new onset LC raises an interesting point, as the conditions are clinically similar. While the exact mechanism of post-infectious LC is unknown, upregulation of nitric oxide synthase is seen in both infection with Vibrio and LC. Further metabolic clarification and investigation are yet required to define the pathogenesis of this disorder.

S2158

Tumor-Colonic Fistula in a Patient With Renal Cell Carcinoma

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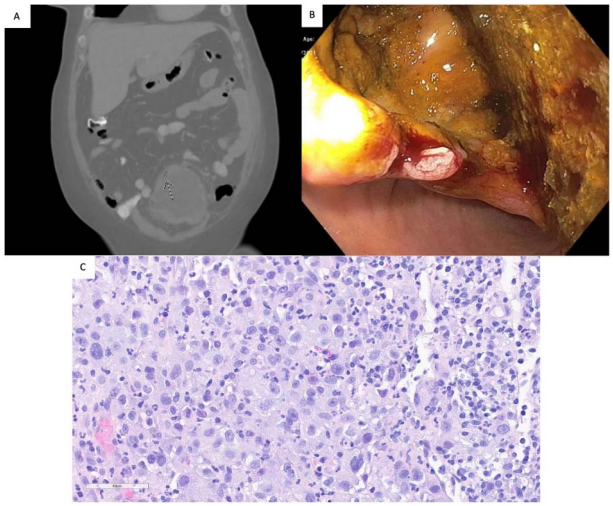
Introduction: Internal gastrointestinal (GI) fistulas can occur between different segments of the GI tract or between the GI tract and another nearby structure. Most of these arise due to a surgical complication or occasionally from an inflammatory process, such as IBD. Rarely, malignant tumors can erode to the GI tract forming a tumor-bowel fistula (TBF). We describe a patient with late-stage renal cell carcinoma (RCC) presenting with persistent fevers and diarrhea secondary to a TBF.
Case Description/Methods: A 55-year-old female with metastatic renal cell carcinoma, presented to the ER with one week of fever, abdominal discomfort, and non-bloody diarrhea. She denied nausea, vomiting, sick contacts or recent travel. On arrival she was febrile (101.4 F), heart rate of 143 bpm. The reminder of the physical exam was unremarkable. Laboratory results revealed a WBC of 52.9 x 10^9 /L. A chest x-ray did not show signs of infection. Vancomycin and piperacillin/tazobactam were initiated. Blood, urine and stool cultures, fecal calprotectin and Clostridium difficile tests were negative. CT scan of the

abdomen and pelvis showed a necrotic mass in the left aspect of the pelvis that appeared to erode the sigmoid colon (Figure A). A sigmoidoscopy revealed a 2 cm area in the sigmoid colon with direct communication to a mass that was biopsied (Figure B). The pathology findings were consistent with RCC (Figure C). A transverse colostomy with mucous fistula was successful. She completed 14 days of antibiotic therapy and the fever resolved. Five months later she has had no complications and continued treatment with immunotherapy and radiation.

Discussion: GI involvement by RCC is very rare and mostly occurs by metastatic spread to the small bowel. Approximately 5-15% of RCCs spread to nearby structures and 20-30% of patients have metastasis at the time of diagnosis. Formation of a TBF might occur spontaneously from tumor eroding to the bowel or as a consequence of chemotherapy and/or radiotherapy. Due to the retroperitoneal location of the kidney, the colon is almost never affected. From rare reported cases, patients mainly present with lower GI bleeding. In our patient, migration of colonic contents to the tumor mass via TBF may have led to superinfection of the mass. In the presence of intra-abdominal tumors, especially several metastatic masses, the presence of fever can be a sign of TBF and appropriate imaging with CT scan and careful endoscopic examination are necessary to establish a diagnosis and guide the surgical management.



[2158] **Figure 1.** (A) CT scan of the abdomen and pelvis shows a necrotic mass in the left aspect of the pelvis that appears to erode the wall of the sigmoid colon; (B) Flexible sigmoidoscopy revealing a 2 cm erosion of the sigmoid colon with direct communication to the mass; (C) H&E image of the colon biopsy. The large cells with variably sized nuclei, sometimes prominent nucleoli and abundant eosinophilic cytoplasm form a sheet of neoplastic cells. On the right-hand side of the image the smaller cells are plasma cells and lymphocytes with a few neutrophils.

S2159

Value of Colonoscopy With High Fecal Calprotectin: A Case of Juvenile Polyp

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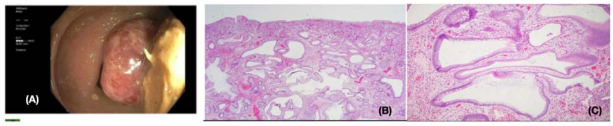
Introduction: Fecal calprotectin (FC) can be used as a non-invasive biomarker of gut inflammation for diagnosis and monitoring of underlying IBD. We are presenting a case of a 6-year-old with rectal bleeding and elevated fecal calprotectin identified as having a juvenile polyp.

Case Description/Methods: A 6-year-old male was evaluated for hematochezia. Abdominal pain has been ongoing for at least 1 month. He had at least one bowel movement daily with bright red blood clots. His abdominal pain was intermittent, diffuse, did not radiate to the back or shoulder, and had not awakened him from sleep. On further investigation, his fecal calprotectin was elevated at 1140 μg/g. Family history for gastrointestinal disorders was not significant. As there was a concern for colitis, a colonoscopy was performed, and a 50 mm pedunculated polyp was found in the sigmoid colon (Figure A), which was removed with a hot snare; the rest of the colon and ileum was normal. Histopathology of that polyp showed numerous cystically dilated crypts, ulcerated surface and negative for dysplasia (Figure B, C), findings consistent with Juvenile/retention polyp. After removing that polyp, the patient's hematochezia resolved.

Discussion: Calprotectin is a calcium and zinc-binding protein of the S-100 family mainly found in neutrophils but also in monocytes and macrophages. The presence of calprotectin in feces indicates bowel inflammation, and it can be measured with an ELISA and its stable up to 7 days in feces. For adults and children over 4 years, a 50 μg/g cut-off level has been well established for diagnostic purposes. However, calprotectin values over 500 to 600 μg/g are highly predictive of IBD or food infections. FC is a valuable biomarker for diagnosis, follow-up, and evaluation of response to therapy for several pediatric gastrointestinal diseases, including inflammatory bowel disease, nonspecific colitis (infectious or allergic) and necrotizing enterocolitis. Elevated levels of FC may indicate juvenile polyps in children as juvenile polyps are composed of inflammatory cells, including many neutrophils, and the mucosal surface is often very friable. According to a study that included 266 children, Juvenile polyps were detected in 12 (4.5%) children. Examination with colonoscopy is almost always warranted in the pediatric population with elevated levels of fecal calprotectin. In the case of Juvenile polyps, FC levels are expected to trend down after polypectomy.



[2159] **Figure 1.** (A, a pedunculate polyp) (B, numerous cystically dilated crypts, ulcerated surface and negative for dysplasia) (C, Intermediate power magnification).

S2160

Treacherous Telescoping: A Unique Presentation of Malignant Intussusception

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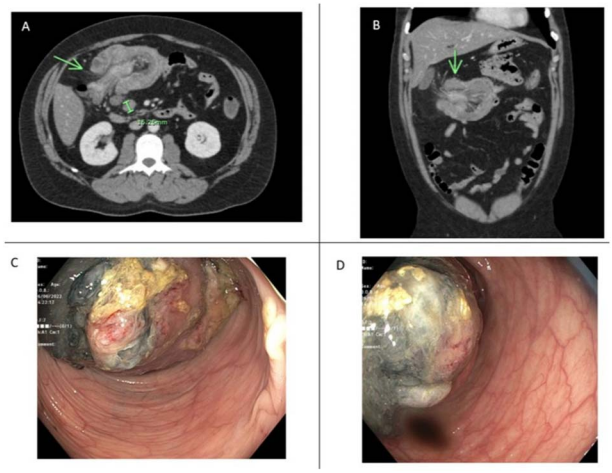
Introduction: Intussusception occurs when a segment of bowel telescopes into an adjacent segment of bowel. Adult intussusception is rare (5% of cases) but has significant mortality if not managed urgently. Given that malignancy causes 80% of adult intussusception, a high level of suspicion for intussusception when evaluating colonic masses is essential. This clinical vignette describes how intussusception - even when presenting atypically via gastrointestinal (GI) bleed - can be diagnosed.

Case Description/Methods: A 38-year-old male presented with one month of hematochezia, melena, abdominal cramps, decreased appetite, and weight loss. He had no hematemesis or cardiovascular risk factors. The patient had no history of H. pylori infection, NSAID use, surgery, or family history of GI cancer. He was hemodynamically stable without abdominal tenderness or peritoneal signs. Melena was in the rectum. Relevant labs were hemoglobin 10.6, white blood cell count 12,400, and platelets 866K. Chest x-ray and EGD were unremarkable. Colonoscopy revealed an ulcerated, necrotic transverse colon (TC) mass obstructing the lumen. The scope failed to be advanced proximal to the mass. The remainder of the distal lumen was unremarkable without signs of ischemia. Biopsy showed a poorly differentiated

adenocarcinoma. An urgent CT demonstrated a bowel-within-bowel appearance of the proximal TC, suggesting intussusception. The patient had a right hemicolectomy with ileocolic anastomosis. Surgical pathology confirmed adenocarcinoma invading the muscularis propria. He is currently undergoing oncological evaluation (Figure).

Discussion: This case highlights the importance of a high clinical suspicion for intussusception when encountering obstructing, necrotic colonic masses. Our patient is decades younger than the median intussusception patient and the colo-colonic location is present in only 5% of cases. His lower GI bleed is uncommon as was the lack of bowel obstruction symptoms. The colonoscopy however, was typical for intussusception; there was no mucosal ischemia or bowel telescoping. CT is the diagnostic modality of choice, capturing the classic "bowel-in-bowel" appearance with 75% accuracy. In intussusception due to cancer, surgical resection is first-line management. Ultimately, evaluating for intussusception with a CT abdomen is imperative in any patient with intestinal malignancy, even without signs of ischemia on endoscopy.



[2160] **Figure 1.** A: CT Abdomen with contrast transverse view shows the bowel within bowel configuration of the transverse colon near the hepatic flexure. Mass within the transverse colon served as the lead point for the intussusception. B: CT Abdomen with contrast coronal view demonstrates similar findings of transverse colon intussusception with "sausage-like" appearance. The remainder of the small bowel and colon was not dilated, suggesting partial obstruction. C: Colonoscopy image of the necrotic, ulcerated circumferential mass obstructing the lumen of the transverse colon. The obstructing nature of the mass can be seen in this image. D: Colonoscopy image of the necrotic, ulcerated circumferential mass in the transverse colon. In this image, necrotic and ulcerated components of the mass can be seen.

S2161

Unusual Presentation of Marginal Zone Low Grade B Cell Lymphoma With Extranodal Involvement as a Large Rectal Mass

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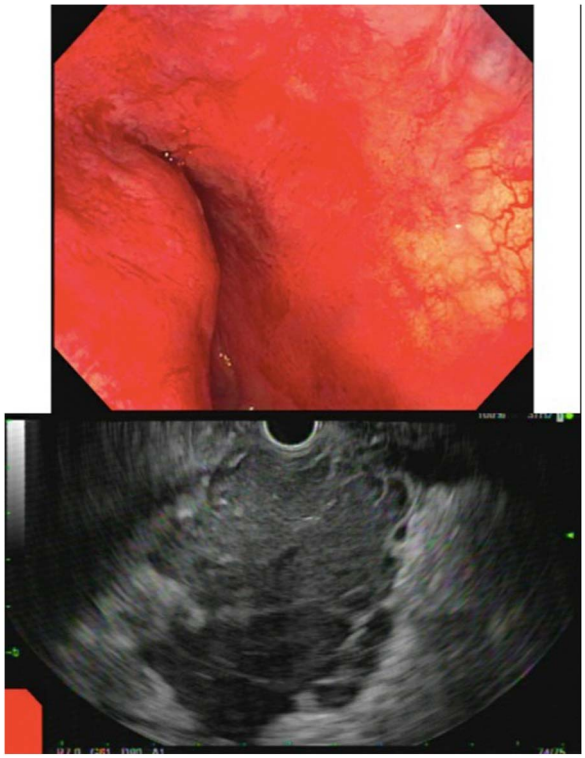
Introduction: Marginal zone low grade B cell lymphoma represents about 7-8% of all non-Hodgkins lymphomas A subtype of marginal zone B cell lymphoma known as extra-nodal marginal zone lymphoma (MZL) of mucosa-associated lymphoid tissue (MALT Lymphoma) commonly occurs in the gastrointestinal tract, with more than half of all cases occurring in the stomach. While the stomach is the most common location, up to 9% occur in the small intestine and rectal involvement is exceedingly rare. MALT-lymphoma typically takes an indolent course with no B symptoms, whereas patients with nodal MZL present with a more aggressive disease course. Given that MZL rarely presents in the rectum, there is no consensus on treatment guidelines. There is also minimal literature on treatment options for a MZL rectal mass of a substantial size, which provided a unique challenge for this case. We present an atypical presentation of a large (greater than 10cm) marginal zone lymphoma involving the rectum who presented with alternating constipation and incontinence.

Case Description/Methods: A 73-year-old female with a known history of untreated non-Hodgkins lymphoma and prior splenectomy presented with a 3 month history of constipation and fecal incontinence. Computed tomography (CT) scan of the abdomen and pelvis with contrast performed at an outside facility showed an 8 cm abnormal soft tissue mass in the pre-sacral space, causing bowel obstruction at the level of the rectum and anus. The patient subsequently underwent magnetic resonance imaging of the pelvis, which showed a large lobulated mass in the pre-sacral space with suspicion for submucosal origin. A lower endoscopic ultrasound (EUS) with fine needle biopsy was performed which showed a greater than 10 cm large lobulated hypoechoic mass in continuity with the posterior wall of the mid and distal rectum, extending into the anal sphincter. Pathology revealed a low grade B-cell lymphoma with a pattern consistent with marginal zone lymphoma. A bone marrow biopsy was consistent with marginal zone lymphoma. The patient was ultimately discharged with outpatient oncology follow up to start systemic chemotherapy (Figure).

Discussion: Marginal zone B cell lymphoma presenting as a large rectal mass is a very unique presentation of this neoplastic process. This finding has been reported infrequently in the literature. In this case, lower endoscopic ultrasound (EUS) with FNB was able to be successfully utilized to make the diagnosis and expedite this patient's treatment course.



[2161] **Figure 1.** Image 1: EUS demonstrating a 10 cm lobulated hypo-echoic mass in continuity with the posterior wall of the mid and distal rectum extending into the anal sphincter. Image 2: EUS demonstrating a large sub-epithelial lesion in the posterior wall of the distal rectum extending up to the dentate line.

S2162

Ulcerative Rectal Mass Complicated by Recto Cutaneous Fistula: Cytomegalovirus as a Culprit

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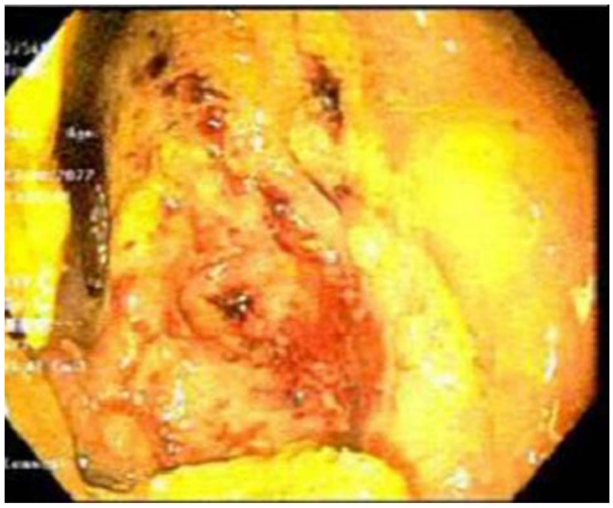
Introduction: Gastrointestinal(GI) involvement with cytomegalovirus(CMV) is uncommon in immunocompetent hosts. The colon is the most commonly involved site followed by the upper GI tract. Rectal involvement is very rare.
Case Description/Methods: An 80-year-old male presented to the hospital with a 3-month history of watery diarrhea with occasional blood, fecal incontinence,40-pound weight loss, generalized weakness, anorexia, perirectal pain, and drainage in the perianal area. He was treated with outpatient doxycycline without improvement. He denied fever, nausea, vomiting, and abdominal pain. Past medical history did not point to an immunocompromised condition. On presentation, he was hemodynamically stable. Abdomen was soft, non tender. During the rectal exam, a firm tissue was felt in the distal rectum. There were 3 perirectal fistulas, draining yellowish liquid. CT abdomen and pelvis showed circumferential rectal wall thickening up to 1.8 cm, involving anterior aspect consistent with rectal mass without regional lymphadenopathy or distant metastasis. Sigmoidoscopy revealed an ulcerated rectal mass with an associated fistulous tract, with negative biopsies for malignancy and positive immunohistochemistry(IHC) for CMV. Serological testing for CMV IgG, IgM, and PCR were positive. Workups including ANA, hepatitis panel, HIV RPR, Stool PCR for Clostridium difficile, and TSH were unremarkable. He was treated with Intravenous Ganciclovir. After 2 consecutive PCR negatives for CMV, maintenance therapy with Valganciclovir was started for a total of 5 weeks. He was followed in the outpatient setting. His symptoms were improved. He also had a significant decrease in perianal drainage (Figure).
Discussion: Cytomegalovirus is well recognized to cause opportunistic infection in an immunocompromised host. Infection in the immunocompetent host is generally mild or asymptomatic. However, in rare situations, it can lead to severe infection with substantial mortality and morbidity. CMV proctitis commonly presents as hematochezia, and weight loss. Endoscopically it presents as ulcers, pseudo membranes, or a mass. CMV proctitis complicated with a deep rectal ulcer with fistula formation like in our patient is very rare. Ganciclovir is the gold standard therapy. Clinicians should have a high index of suspicion for CMV proctitis irrespective of their immune status in patients with chronic diarrhea, weight loss, and rectal mass. Timely diagnosis and treatment with appropriate antiviral therapy are crucial.



[2162] **Figure 1.** Flexible Sigmoidoscopy showing ulcerated rectal mass with the surrounding area of erythematous, furrowed rectal mucosa.

S2163

Understanding Prolonged Survival in Advanced Colorectal Cancer Using Genomics: A Case Series

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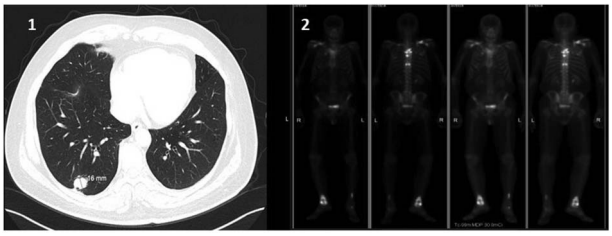
Introduction: Recent progress in molecular biology and cancer genome research had opened a new venue for clinical research and changed treatment paradigm for metastatic colorectal cancer.
Case Description/Methods: Case 1: A 61-year -old Hispanic male underwent colonoscopy which revealed an mass in the proximal ascending colon with biopsy showing moderately differentiated adenocarcinoma. The patient underwent a right hemicolectomy in 2012. He subsequently completed chemotherapy with mFOLFOX-6. Further treatment was declined by patient. Follow up chest CT scan in April 2018, uncovered progression of pulmonary nodules (Figure, Panel 1). Patient was put on FOLFIRI/bevacizumab chemotherapy. NGS study showed following results; MS stable; TMB 4 mutations/Mb (low); APCR1450, BRAF D594N, FAM 123B K761, SOX9 G225fs, and TP53 R175H.The patient has stable disease on follow up. Case 2: A 73-year-old Hispanic male underwent colonoscopy showing a obstructing mass in the sigmoid colon. Biopsy showed moderately differentiated adenocarcinoma in December 2013. Patient underwent sigmoidectomy. Liver masses were found on repeat CT abdomen. The NGS reported as follows; MS-Stable, TMB 1 muts/Mb(low), APC T282fs*12/P1453fs*20, CDK8 amplification, fms like tyrosine kinase 3 (FLT3) amplification, KRAS amplification and TP53 V147D. It also detected wild type KRAS mutations in exons 2, 3 and 4. The patient was started on chemotherapy with mFOLFOX. Follow- up studies show stable disease. Case 3: A 73-year-old Hispanic male underwent colonoscopy showed a completely obstructing mass in the sigmoid colon. Biopsy showed moderately differentiated adenocarcinoma in June 2012. The tumor cells have KRAS G12D mutation in in codon 12 of KRAS. He underwent a left hemicolectomy. He completed mFOLFOX6.PET scan was done and showed a right upper lobe mass consistent with metastatic cancer. He was started on FOLFIRI/ bevacizumab. NGS reported as follows; MS-Stable, TMB 1 muts/Mb(low), APC V1452fs*21, and ATM S47fs*11. Bone Scan intense uptake in the right distal tibia (Figure, Panel 2). MRI of the right lower extremity showed a lesion in the distal tibia. He was then switched to irinotecan and bevacizumab regimen. He has stable disease.
Discussion: Identification of genomic signature is key to understanding the molecular mechanism of CRC and the development of novel therapeutics.



[2163] **Figure 1.** Panel 1 (left) shows CT Chest for Case 1 with multiple pulmonary nodules few with cavitation, largest 9mm. Panel 2 (right) shows Bone Scan for Case 3 in February 2021 with intense uptake in the right distal tibia.

S2164

An Unusual Case of Diarrhea in an Immunosuppressed Patient

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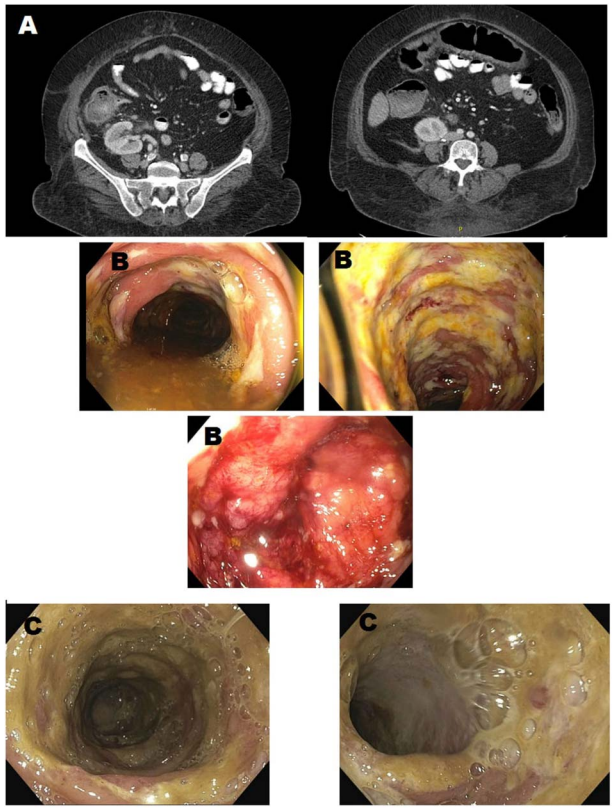
Introduction: Amoebic Colitis, a frequent clinical manifestation of invasive intestinal infection due to *Entamoeba histolytica*, is a common cause of diarrhea mostly prevalent in developing countries due to unsanitary conditions. Although 90% of the cases may be asymptomatic carriers, one of the most common clinical manifestations include dysentery. It carries an excellent prognosis if diagnosed promptly and treated. However, establishing a diagnosis of Amoebic Colitis is often challenging. We highlight a unique case of Amoebic Colitis in a 73-year-old female in a setting of immunosuppression.
Case Description/Methods: A 73-year-old female from Qatar with ESRD, DM, HTN, and Renal cell carcinoma was admitted for abdominal pain, bloody diarrhea, and on and off a fever for 3 months. She was on tacrolimus, mycophenolate, and prednisone for her renal transplant. Diffuse abdominal tenderness was noted on examination but vitals were normal. CT scan showed ascending and transverse colon colitis and colonoscopy showed congested rectal, rectosigmoid, and sigmoid colon mucosa with multiple ulcers in descending, transverse, and ascending colon and rectum. Stool calprotectin was >3000 mg/kg Biopsy results showed active colitis with ulcers. Intravenous steroids were started and she showed improvement but abdominal pain and bloody diarrhea recurred with rise in CRP (from 6.9 to 15.5 mg/kg) when she was switched to oral steroids. A repeat CT scan showed an increase in the involvement of the right colon and piperacillin-tazobactam was started. Repeat colonoscopy showed a vascular pattern in mucosa diffusely decreased and nonbleeding ulcerated mucosa. Meanwhile, the E. histolytica antibody was positive. Antibiotics were switched to oral metronidazole. Pathology showed chronic active colitis with ulcer and increase apoptotic crypt epithelial cells. The clinical condition continued to improve and she was discharged home on steroid taper with a plan to repeat the scope in 3 months. She is doing well and on regular follow-up (Figure).

Discussion: Amoebic colitis should be a differential diagnosis for individuals from eastern countries where the prevalence of *Entamoeba histolytica* continues to be high as a delay in diagnosis may lead to adverse outcomes. Diagnosis often requires a combination of different modalities including stool microscopy, stool antigen testing, and colonic biopsies. Treatment with metronidazole, tinidazole, paromomycin, diiodohydroxyquin, or diloxanide furoate is often highly safe and effective.



[2164] **Figure 1.** A- Ascending and transverse colonic wall thickening consistent with colitis B - Congested, friable, and ulcerated mucosa C- The mucosa vascular pattern in the descending colon was diffusely decreased- after treatment.

S2165

Endoscopic Mucosal Resection of Polyp Inside Diverticulum Using Standard Lift Technique – A Case Report

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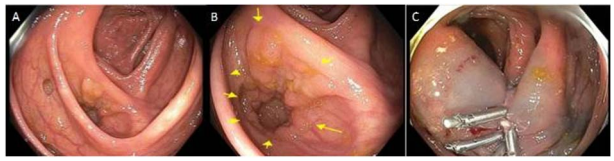
Introduction: Polyps arising within or adjacent to a diverticulum are an uncommon occurrence and pose a unique challenge for removal through endoscopic techniques. This type of removal can be less safe due to the diverticula lacking mucosa and higher risk of complications including perforation. We present a rare case of a patient presenting with an ascending colon sessile polyp near a diverticulum removed with endoscopic mucosal resection (EMR).
Case Description/Methods: 59-year-old male with history of 3 prior colonic adenomas presented for follow-up surveillance colonoscopy 4 years after the last. He was found to have multiple small and large-mouthed diverticula throughout the entire colon and in the proximal ascending colon a 20 mm sessile polyp was found extending into a large diverticulum. The polyp was not resected because of the location near the diverticulum and lack of expertise by the initial endoscopist and the area was therefore tattooed. A colonoscopy was performed 3 months later by an expert endoscopist after discussing the polyp removal techniques with the patient. Around 34 mL of Orise gel was initially injected into the polyp with adequate lifting. The polyp was then lifted out of the diverticulum and retracted. Later, cap and snare mucosal resection were performed with successful removal of the polyp. Residual tissue was removed by inverting the diverticulum into the cap and snaring the tissue and any potential residual tissue was ablated with hot biopsy forceps using soft coagulation. The mucosal defect was closed with 4 hemostatic clips across the diverticulum. Pathology returned with a tubular adenoma. A surveillance colonoscopy was performed 6 months later without evidence of recurrence (Figure).
Discussion: Various techniques have been used to remove colonic polyps within a diverticulum including standard or underwater EMR, and endoscopic band ligation. Few cases have been written describing standard EMR techniques for these high risk lesions. When injecting submucosally, it is helpful to inject into the edge between the polyp and the diverticulum to create a cushion of fluid between them which allows adequate separation between the 2 and enables better polyp delineation by pushing the polyp distally. It is vital to start the injection at the edge of the polyp and move the polyp away from the diverticulum. Standard EMR requires less time and preparation than underwater EMR and in the hands of a skilled advanced endoscopist is feasible for polyps located in diverticula.



[2165] **Figure 1.** A, B - Initial Colonoscopy with 20 mm sessile polyp within a diverticulum in proximal ascending colon C - Ascending colon diverticulum defect closed with 4 clips.

S2166

Deceptive Presentation of Metastatic Cancer: Rectal Pain and Obstruction Leading to New Diagnosis of Urothelial Carcinoma by Colonoscopic Evaluation

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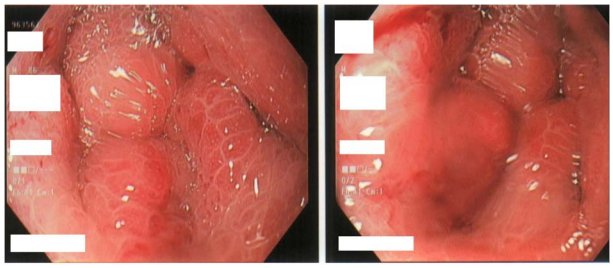
Introduction: Rectal metastasis of urothelial cancer is extremely rare. Typically, metastatic sites include lungs, liver, or bone with presenting symptoms usually consisting of genitourinary complaints (1). In this case, we present a case who presented with GI complaints, leading to extensive evaluation leading to a diagnosis of urothelial cancer metastatic to the rectum. This diagnosis of urothelial cancer, made in complete absence of urological complaints, is extremely atypical with no case reports documenting such an occurrence.
Case Description/Methods: An 86-year-old male presented to the GI Clinic with a 4-week history of rectal discomfort and a constant urge to pass gas. He had a prior history of prostate cancer treated with radiation.. There were no urinary symptoms including hematuria, dysuria, or changes in urinary frequency. CT Scan showed mild right hydronephrosis with marked thickening of the rectum. A detailed rectal exam revealed a mass with a tight stricture. Urgent endoscopy was done which revealed an atypical rectal mass which could not be negotiated with a gastroscope. Pathology of the mass showed a poorly differentiated carcinoma and immunohistochemical staining suggested urothelial cancer and he underwent an urgent laparoscopic loop colostomy and biopsy of the anorectal mass. Later, cystoscopy revealed a bladder tumor focused on the right trigone ladder wall base. This 4 cm bladder wall mass was resected and the patient had a right nephrostomy tube placed. A PET/CT scan revealed a soft tissue fullness with abnormal FDG accumulation in the right urinary bladder base with maximum SUV 5.2 and no evidence of metastasis. Because of poor performance status, the patient declined Pembrolizumab treatment and elected for hospice care (Figure).
Discussion: While urothelial carcinoma rarely metastasizes to the rectum, it has been documented in several case reports. Two different meta-analyses and another individual case report show 17 occasions where this phenomenon occurred, but in each case there was evidence of urinary symptoms or previous diagnosis of urothelial carcinoma (2, 3, 4). This case demonstrates a unique presentation of metastasis without preceding genitourinary symptoms or a previous diagnosis of urothelial cancer, which led to the primary diagnosis via colonoscopy and subsequent pathology. This demonstrates the need to keep a wide differential when assessing rectal masses and symptoms of obstructive defecation even if a patient presents with no urinary symptoms or history of malignancy.



[2166] **Figure 1.** Obstructive rectal mass visualized on colonoscopic evaluation.

S2167

Chronic, Massive Pneumoperitoneum in a Patient Without Signs of Peritonitis: A Case Report

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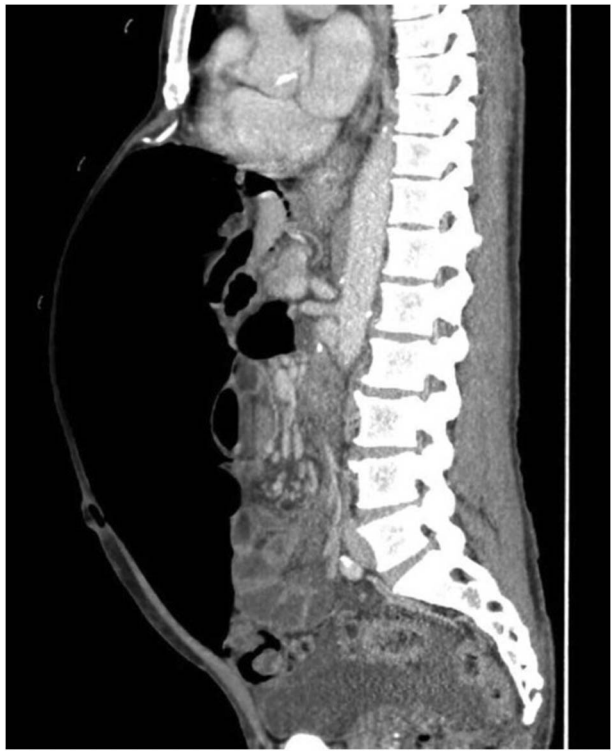
Introduction: Pneumoperitoneum is the presence of free air in the abdominal cavity. This alarming symptom can be due to a wide variety of etiologies, including infection, trauma, perforation, and others. However, pneumatosis intestinalis, which is the presence of free air in the extraluminal space, can be due to other pathology unrelated to the GI tract. It can be seen in pulmonary disease, such as COPD and asthma, autoimmune conditions, and drug-induced causes as well. It can present with more benign symptoms. We present a case of chronic pneumatosis intestinalis that was present in the patient for over 2 years and presented with relatively minor, nonspecific symptoms.
Case Description/Methods: This patient was a 62-year-old male who presented with concerns of bloating and cramping, ongoing for 2 years. Previous work-ups had not revealed a clear cause for his ongoing symptoms. He had undergone CT of the abdomen, which was significant for massive pneumoperitoneum, as well as fluid-filled prominent loops of small bowel concerning for ileus or obstruction. There was no site of bowel perforation that could be visualized. Upper endoscopy and colonoscopy had been performed, which showed normal mucosa and colonic diverticulosis. After further workup at an additional institution, diagnostic laparotomy was recommended to further evaluate his small bowel. At the lower anterior diaphragm, the peritoneal surface had subperitoneal emphysema, suggesting a potential thoracic source for the pneumoperitoneum. Thoracic surgery were consulted for exploratory right-sided thoracoscopy since he was noted to have peritoneal blebs along the diaphragm most notably, with one also being identified on the liver. It was concluded that the etiology was most likely due to an alveolar-peritoneal fistula through the right hemidiaphragm (Figure).
Discussion: Pneumatosis Intestinalis can be a benign presenting symptom. Pneumoperitoneum can be due to primary (idiopathic) or secondary causes. Secondary causes are numerous, and these can be seen in the setting of COPD, immunodeficiency, or acute GI pathology. Increased pressure in the abdomen or the mediastinum can result in gas diffusing across tissues and into the bowel wall. Treatment and management varies depending on the patient's presentation. More serious abdominal pathology requires surgical management, while benign causes in the setting of chronic lung pathology can be asymptomatic, or present with mild symptoms that require only conservative medical management.



[2167] **Figure 1.** Pneumatosis Intestinalis on CT Scan.

S2168

The Use of Rituximab for IgG4–Related Sclerosing Mesenteritis

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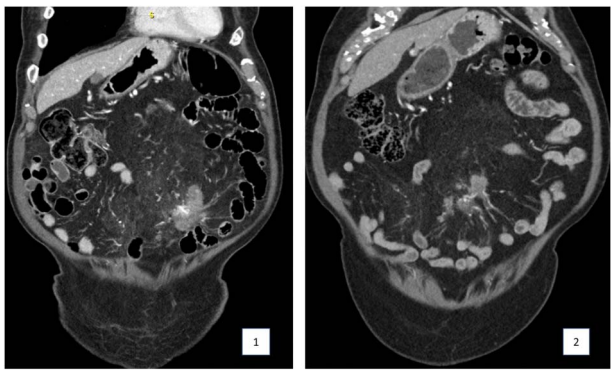
Introduction: Sclerosing mesenteritis (SM) is an uncommon fibro-inflammatory disease affecting the abdominal mesentery. Although some patients are asymptomatic or have minimal symptoms, SM can present with complications such as bowel obstruction, chylous ascites, and mesenteric ischemia. First-line therapy includes glucocorticoids in combination with tamoxifen in those who are symptomatic.
Case Description/Methods: An 82-year-old man with a history of prostate cancer and melanoma in remission and lymphocytic colitis presented with 4-months of poor appetite and 40-pound unintentional weight loss. Computed tomography (CT) abdomen showed an irregular 8.6 cm mesenteric mass with surrounding misty mesentery (Figure, Panel 1). CT-guided biopsy demonstrated fibro-adipose tissue with increased IgG4-positive plasma cells, supporting a diagnosis of IgG4-related SM. Follow-up CT abdomen 6 months later demonstrated enlargement of the mass with new encasement of the jejunal and ileal branches of the superior mesenteric artery and vein. Given impending mesenteric ischemia, he was treated with rituximab, a monoclonal anti-CD20 antibody, with 2 infusions 2 weeks apart without side-effects. He had contraindications to first-line therapy with glucocorticoids given prior suicidal ideation while on budesonide for microscopic colitis. Three months following treatment, his erythrocyte sedimentation rate improved from 52 to 25 (reference range, 3-28 mm/h) and IgG4 level from 851 to 267 (2.4-121 mg/dL). CT abdomen demonstrated a 50% decrease in the volume of the mesenteric mass without significant vascular involvement (Figure, Panel 2) and he had regained 30 pounds.
Discussion: Although rituximab has been studied for IgG4-related disease in general, the use of rituximab specifically for IgG4-related SM is not well-known. We report a case of a patient with IgG4-related SM treated effectively with rituximab, suggesting this may be a suitable medication for those who have contraindications or do not respond to current first-line therapy, especially if IgG4-related. Whether this drug would also work in patients with SM not related to IgG4 disease is unknown. Patients treated with rituximab should be closely monitored for infections, as well as allergic and infusion-related reactions.



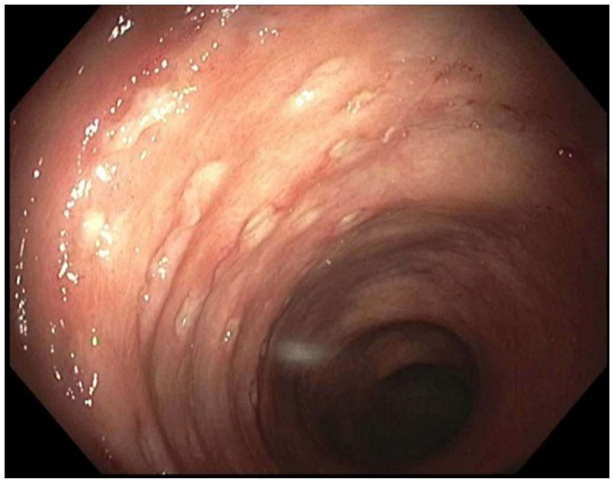
[2168] **Figure 1.** CT abdomen pelvis of sclerosing mesenteritis before (1) and after (2) rituximab treatment.

S2169

***Cryptococcus* Colitis: An Atypical Cause of Chronic Diarrhea in an Immunocompetent Patient**

Cyrus V. Edelson[1], Randy Wright, MD[2].
[1]Brooke Army Medical Center, San Antonio, TX; [2]UT Health San Antonio, San Antonio, TX.

Introduction: Cryptococcal colitis is rarely identified as an etiology of chronic diarrhea in immunocompetent individuals given its propensity towards HIV or immunosuppressed patients. We present an interesting case of an immunocompetent individual found to have cryptococcal colitis requiring histopathologic diagnosis following negative PCR evaluation.
Case Description/Methods: A 59-year-old male with chronic kidney disease with no prior diagnosis of overt immunocompromising state who presented with chronic diarrhea and associated malnutrition with significant weight loss over the last several months. Initial laboratory evaluation showed anemia without thrombocytopenia, hypoalbuminemia, and elevated INR without derangements of liver associated enzymes. Extensive infectious workup to include HIV, celiac disease, and community acquired GI PCR was pan negative to include Cryptosporidium, Giardia, Entamoeba histolytic, and Clostridium difficile. A CT abdomen/pelvis was unremarkable for colonic or small bowel inflammation. Colonoscopy was performed, remarkable for multiple scattered diminutive ulcers localized to the rectum and extending to 15 cm from the anal verge with biopsies obtained. Subsequent sexual transmitted infectious testing was negative for chlamydia, gonorrhea, and HIV although notable for a positive treponemal palladium antibody with a negative RPR. Colonic biopsies returned with numerous fungal organisms with narrow based budding yeast most suggestive of cryptococcus (Figure).
Discussion: Cryptococcus is one of the leading causes of death among immunosuppressed individuals mostly from cryptococcus neoformans as well as cryptococcus giattii. Cryptococcus can be diagnosed with multiple modalities to include serologic cryptococcal polysaccharide capsular antigen, PCR, or direct visualization of the fungus with an India ink stain on sputum cultures, CSF, or histopathologic staining of tissues. With a previously negative cryptococcus PCR, our patient required histopathologic tissue staining for diagnosis following direct endoscopic visualization. This highlights the difficulty of diagnosing cryptococcal colitis in immunocompetent individuals without disseminated infection. Cryptococcus colitis should remain in the differential for otherwise immunocompetent individuals with chronic diarrhea with conditions that impair the immune system such as diabetes, chronic kidney disease, and cirrhosis.



[2169] **Figure 1.** Rectal ulcerations.

S2170

Solitary Rectal Ulcer Syndrome Masquerading as Malignant Ulcerated Mass

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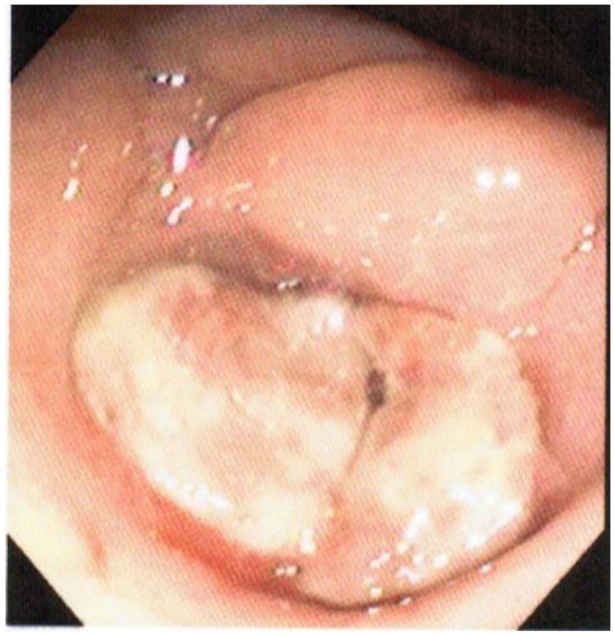
[1]Raritan Bay Medical Center, Perth Amboy, NJ; [2]Xavier University School of Medicine, Woodbury, NY.

Introduction: Solitary rectal ulcer syndrome (SRUS) is a rare benign disorder, presented with rectal bleeding, straining during defecation, tenesmus, pelvic fullness, and passage of mucus; however, it can be asymptomatic. Endoscopic findings include mucosal erythema, ulcers, and polypoid/mass lesions. In most cases, the lesions are in the anterior rectal wall within 10 cm of the anal verge.
Case Description/Methods: A 90-year-old African American female presented with lower abdominal discomfort, constipation, and feeling of incomplete defecation. She had a history of colon resection for distal sigmoid colon cancer and a history of hysterectomy for uterine cancer. Rectal examination revealed positive fecal occult blood; physical examination and lab results were unremarkable. Colonoscopy showed an ulcerated non-circumferential, non-obstructing mass in the anterior rectal wall within 10 cm of the anal verge; the mass is 2 cm in length and 14 mm in diameter, with no active bleeding. Specimens were sent for biopsy with high suspicion of malignancy. The patient was instructed to use a high fiber diet and avoid straining, in addition to mesalamine 1 gm, suppositories, twice daily. Biopsy showed granulation tissue and fibro purulent debris, with no neoplastic changes. Proctoscopy was done 3 weeks later and showed healing of the ulcer and complete resolution of the surrounding edematous tissue (Figure).
Discussion: Several factors play a role in the pathogenesis of SRUS; rectal prolapse and paradoxical contraction of the puborectalis muscle, direct digital trauma, and hormonal effects in women. It is crucial to differentiate SRUS from other disorders with similar clinical presentation and endoscopic features, including inflammatory bowel disease, ischemic colitis, and infectious proctitis. The distinction between them can be made by histopathological assessment. The treatment of SRUS depends upon the severity of symptoms and the presence of a concomitant rectal prolapse. The initial approach includes conservative measures and biofeedback; however, surgical intervention might be required in severe cases. SRUS is a chronic condition, and many patients have recurrent symptoms regardless of the treatment approach.



[2170] **Figure 1.** Colonoscopy showing ulcerated "mass" in the rectum.

S2171

A Case of Colorectal MALToma

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Introduction: Non-Hodgkin lymphoma is classified as nodal and extranodal. Extranodal lymphoma frequently involves the stomach and is associated with H. Pylori infection. Colonic involvement, however, is rare. We present a case of MALT lymphoma that was found incidentally on colonoscopy.
Case Description/Methods: A 73-year-old male with a history of diabetes presented for surveillance colonoscopy. Previous colonoscopy reports were unavailable, but the patient endorsed a history of benign polyps. Colonoscopy revealed a patchy area of inflammation and ulceration localized to the rectum and rectosigmoid colon. Biopsies demonstrated prominent lymphoid aggregates with inconclusive flow cytometry. He was referred to oncology who recommended further sampling. He underwent repeat colonoscopy 5 months later which demonstrated a 3 cm polyp in the cecum in addition to multiple segmental aphthae (uniform punctate lesions with surrounding erythema and central pallor) stretching from the distal sigmoid colon to the rectum. Pathology of the polyp demonstrated several lymphoid aggregates and rectosigmoid biopsies demonstrated prominent lymphoid aggregates that were positive for CD20, CD79a, BCL-2. Findings overall were consistent with extranodal marginal zone lymphoma. PET scan demonstrated diffuse lymphadenopathy, splenomegaly, and intense hypermetabolic activity throughout the colon. Stool studies were not obtained. The patient was recommended for chemotherapy with weekly rituximab which has been well tolerated to date.
Discussion: Colorectal lymphoma is a rare occurrence, and represents less than 1% of all colorectal malignancies. Furthermore MALTomas present as primary colonic lymphomas in only 2.5% of cases. MALTomas predominate in men aged 50-70 years old and are associated with chronic immunosuppression and H. pylori infection when found in the stomach, although this does not necessarily hold true when found in the colon. Patients can present with symptoms of abdominal pain, obstruction, or GI bleeding. Endoscopic appearance of MALTomas is not well defined and can range from a single polypoid lesion to ulcerated mucosa or erosions. A combination of surgery, chemotherapy, and radiation is available for treatment of advanced disease.Primary colonic lymphoma is rare and there are only a few cases reported in the literature. Although rare, it is important to keep NHL in the differential when polypoid or ulcerated lesions are found on colonoscopy.

S2172

A Unique Case of Disseminated Histoplasmosis Presenting as Colonic Ulcers

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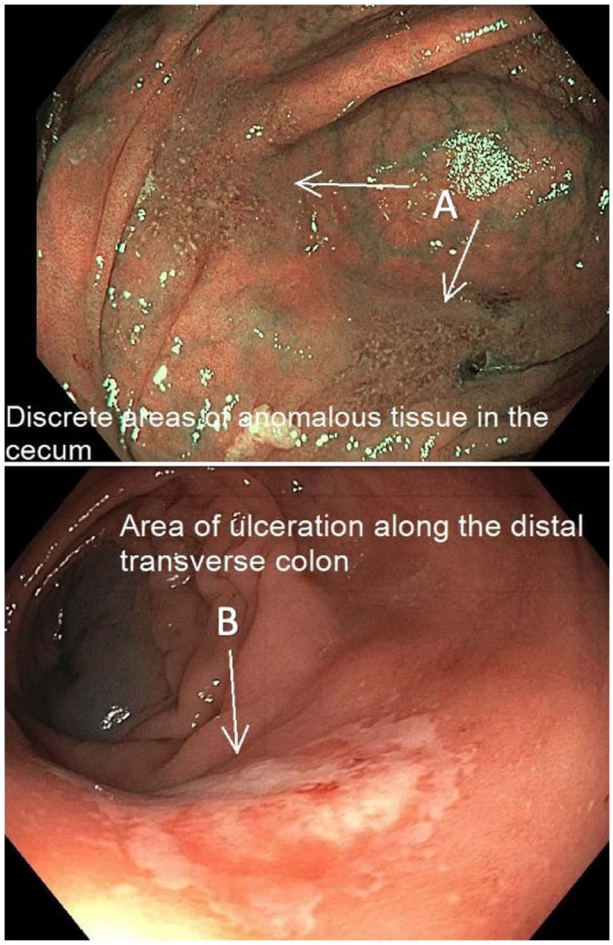
Introduction: Histoplasmosis is the most common endemic mycosis in the United States with a disseminated form usually only seen in immunocompromised patients. While localized infections are usually self-limiting and often asymptomatic, some patients present with extra-pulmonary disseminated disease. Although case reports have described colonic and ileal involvement, gastrointestinal manifestations are uncommon. Here we report isolated colonic involvement of disseminated histoplasmosis in an asymptomatic patient.
Case Description/Methods: A 62-year-old male with a history of end stage renal disease secondary to IgA nephropathy status post living donor renal transplant on chronic immunosuppressive therapy presented for a routine screening colonoscopy. The patient denied gastrointestinal and pulmonary symptoms to include: cough, shortness of breath, fever, abdominal pain, diarrhea and gastrointestinal bleeding. He grew up in the state of Mississippi and currently resides in Texas working in landscaping. Within the cecum, there were 2 discrete areas of abnormal appearing tissue (Figure A). A 10mm irregular, superficial ulcer with no high-risk stigmata for bleeding was also noted within the distal transverse colon (Figure B). Cold forceps biopsies were obtained at both sites. Surgical pathology with Grocott's methenamine silver stain demonstrated abundant intra-histiocytic and extracellular organisms morphologically compatible with histoplasmosis. Given a potential for fungal morphological mimicry, the patient was serologically tested for histoplasmosis, coccidioides, and blastomyces. Ultimately, PCR from the tissue sample taken during the biopsy tested positive for Histoplasma capsulatum. The patient was started on itraconazole for 12 months duration which he tolerated without side effects and remained asymptomatic on follow up.
Discussion: This case demonstrates an unusual presentation of disseminated histoplasmosis with asymptomatic colonic involvement including the variable endoscopic appearance of this fungal infection. With a mortality rate as high as 31% in the immunocompromised population gastroenterologists need to remain cognizant when encountering colonic ulcerations or abnormal mucosa in high risk patients. In addition, this case highlights the importance of tissue sampling to secure the diagnosis along with the efficacy of itraconazole in treating this potentially deadly infection.



[2172] **Figure 1.** A. Discrete area of anomalous tissue in the cecum B. Area of ulceration along the distal transverse colon.

S2173

A Twist of Fate: The Cecal Bascule

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Introduction: Cecal volvulus is a rare clinical entity with an incidence of 2.8-7.1 per million per year and accounts for 1-2% of large bowel obstruction. The rarest type of cecal volvulus is cecal bascule, accounting for 5-20% of all cases. It occurs when the cecum folds up over itself in an anteromedial orientation with a competent ileo-cecal valve. This allows for gaseous and fluid distention. The pathogenesis is still unclear but the literature suggests that congenital or acquired adhesion may be responsible as a mobile cecum. Symptoms consist of abdominal pain, distention, nausea and obstipation. Diagnosis may be challenging due to its rarity. Here we present a male with an incidental imaging finding suggestive of cecal bascule.
Case Description/Methods: An 82-year-old male patient with history of prostate cancer, atrial fibrillation on Apixaban, diabetes and chronic kidney disease who was consulted to gastroenterology services due to rectal bleeding. He reported an episode of intermittent rectal bleeding in the past year mostly secondary to straining due to constipation. Last colonoscopy on 2010 showed diverticulosis plus internal and external hemorrhoids; no polyps or masses. He denied abdominal pain, weight loss, or early satiety. Hemoglobin was stable and normal rectal exam. In view of risk vs benefits patient opted for CT colonography. Study with evidence of diverticulosis and a large cecal bascule. Upon follow-up, he reported feeling well and denied abdominal pain or recurrence of rectal bleeding. He had a complicated appendectomy 7 years ago. Patient was consulted to general surgery for possible cecopexy.
Discussion: Cecal bascule is a rare subtype of cecal volvulus that mostly occur in older patients and usually presents with marked GI symptoms, such as obstruction, needing emergent treatment. Risk factors are mostly due to embryogenic defects or iatrogenic (abdominal surgery). Diagnosis is made via imaging study, such as CT, or laparoscopy showing the cecum folding upward resulting in obstruction. Management is mostly surgical with resection and cecopexy. Here with present a case of cecal bascule with a rare presentation of minimal symptoms. The patient had history of a complicated appendectomy most likely being the inciting factor of the cecal bascule. Most cases in literature present after a more recent surgical procedure. The importance of this case is to bring attention of this rare clinical entity, its diagnosis and how it may present with non-specific chronic symptoms.

S2174

An Interesting Case of Sunflower Seeds Causing Fecal Impaction

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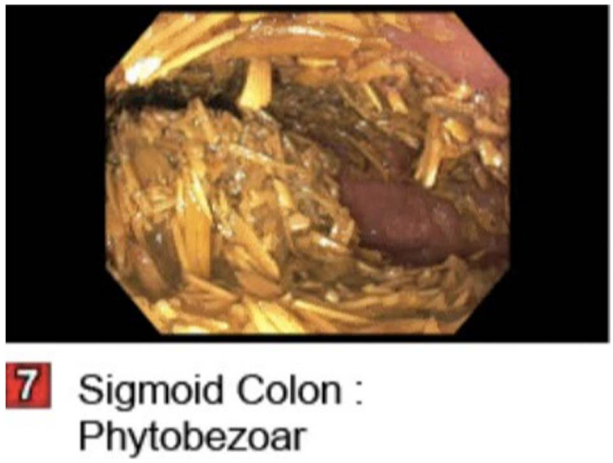
Introduction: Bezoars are collections of indigestible foreign material accumulated and conglomerated in different locations throughout the gastrointestinal tract. Seed bezoars are a subcategory of phytobezoars, and are the most among the gastrointestinal bezoars. Seed bezoars in the rectum have been considered an uncommon cause of fecal impaction in adults. In this case report, we present a case of fecal impaction due to sunflower seeds, in an otherwise healthy adult patient.
Case Description/Methods: A 29-year-old male from the community with a past medical history of HLD, GERD presented to ED for evaluation of abdominal discomfort, tenesmus and urinary retention. He endorsed eating a whole bag of sunflower seeds with the skin. Physical exam was significant for suprapubic tenderness. Labs were grossly unremarkable. CT abdomen and pelvis showed cholelithiasis, a moderately distended rectum with stool with no bowel obstruction. Patient underwent flexible sigmoidoscopy which revealed phytobezoar in rectum and rectosigmoid colon. Phytobezoar was partially removed during the procedure. Post procedure, mineral oil enema was used for further removal of the phytobezoar and to alleviate the patient's symptoms (Figure).

Discussion: Bezoars are collections of indigestible foreign material accumulated and conglomerated in different locations throughout the gastrointestinal tract, however, they are most commonly found in the stomach . Bezoars are divided into 4 groups according to their combination, including phytobezoars, trichobezoars, pharmacobezoars and lactobezoar. Among the 4 types of bezoars, phytobezoars are the most common. Bezoars from fruits and vegetables tend to accumulate in the stomach, however, seed bezoars, due to their small size, pass the pylorus more easily and tend to form an impaction either in colon and rectum. The diagnosis of seed bezoars is based on careful history and digital rectal examination. However, imaging scans help physicians to diagnose seed bezoar in the small intestine and colon which require further investigations. The most frequently seen CT findings of bezoars include the appearance of a round or ovoid or a long sausage-shaped mass containing mottled gas at the obstructed site. Treatment and evacuation of phytobezoar is based on its location in the gastrointestinal tract. The currently available treatment options for phytobezoar include dissolution of the bezoar by Coca-Cola, papain, cellulase, removal by endoscopic devices, laparotomy, and laparoscopic surgery.



[2174] **Figure 1.** Phytobezoar.

S2175

Now You See Me, Now You Don't: A Case of *Campylobacter Jejuni* Colitis Presenting as a Colonic Mass

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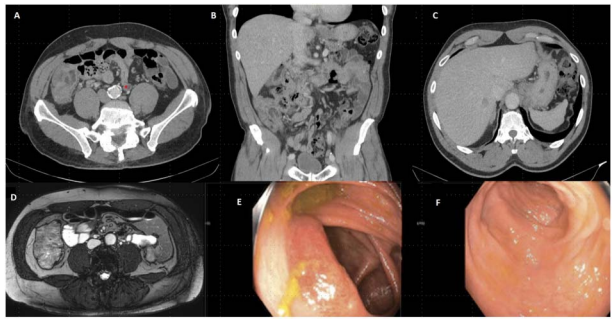
Introduction: *Campylobacter jejuni* is responsible for 3-6% of diarrheal illnesses in the United States. Inoculation follows ingestion of a contaminated source such as poultry, unpasteurized milk, or drinking water. The presentation of a *C. jejuni* infection may radiographically and endoscopically mimic other pathologies such as colonic malignancy and inflammatory bowel disease (IBD).
Case Description/Methods: A 66-year-old man with a past medical history of prostate cancer in remission and a 6mm colonic polyp removed 5 years prior presented to the emergency department with 5 days of watery diarrhea. He complained of 6 watery bowel movements per day associated with colicky abdominal pain and bloating. He was hemodynamically stable with a physical exam notable for severe tenderness in the right lower quadrant. Serum chemistries did not reveal any abnormalities. Computed tomography revealed severe, focal bowel wall thickening in the ascending colon and a 1.7cm hypodense lesion in the right hepatic lobe which was confirmed on magnetic resonance of the abdomen. The radiologist's interpretation emphasized concern for colonic malignancy with metastasis to the liver (Figure). Endoscopic evaluation revealed diffusely erythematous, granular and ulcerated mucosa throughout the colon with concern for infectious vs inflammatory colitis. Histologic evaluation of ascending colonic mucosal biopsy revealed moderately active chronic colitis with extensive cryptitis and crypt abscesses. Stool polymerase chain reaction was notable for *C. jejuni* infection and the patient achieved clinical and endoscopic remission without antimicrobial therapy.
Discussion: In patients with *C. jejuni* enterocolitis, radiographic imaging may reveal signs of bowel wall edema or ulcerations which may resemble colonic malignancy or IBD. Endoscopic findings of campylobacter enterocolitis are non-specific, however, may reveal edematous, erythematous, and friable mucosa which may be associated with hemorrhage. Inflamed mucosa can be either isolated or discontinuous. Colonic ulcers may present as either aphthous or linear (may resemble cobblestoning as seen in Crohn's Disease). Histologic evaluation can reveal cryptitis and crypt abscess formation similar to findings of ulcerative colitis. This case highlights the range of radiographic and endoscopic presentations of *C. jejuni* Colitis. Infectious colitis should remain on the differential for radiographic evidence of colonic edema in the right clinical setting.



[2175] **Figure 1.** A and B: CT Abdomen/Pelvis showing ascending colon wall thickening resembling mass; C: CT of Hypoechoic liver mass; D: T2-weighted MRI Abdomen of ascending colon wall thickening resembling a mass; E: Colonoscopy image revealing inflamed mucosa of ascending colon; F: Ulcerated mucosa of the sigmoid colon.

S2176

Co-Occurrence of Two Rare Diseases: CMV Colitis in a Patient With Clozapine-Included Ischemic Colitis

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Introduction: CMV (Cytomegalovirus) colitis is a well-recognized disease in immunocompromised patients, however, there are case reports and series describing the disease in immunocompetent hosts. Given its rarity, its characteristics are yet to be well defined. We present a case of CMV colitis in an immunocompetent patient who likely had concomitant ischemic colitis from clozapine.

Case Description/Methods: A 68-year-old female with PMH of Schizophrenia on Clozapine, chronic constipation presented to the emergency department with 1 day of bloody diarrhea and NBNB vomiting. On arrival, she was noted to be tachycardic and tachypneic with a physical exam revealing diffuse abdominal tenderness and hypoactive bowel sounds. Initial labs were notable with leukocytosis of 19 K/ul with bands. Serum lactate, renal function, and liver function tests were normal. Clozapine level was elevated at 1143 ng/dl. Computed Tomography Angiography of the abdomen showed severe colitis of the entire descending colon. Working diagnosis at that point was Infectious colitis, inflammatory colitic, and ischemic colitis. She completed 5 days of antibiotics despite negative Gastrointestinal panel PCR with some relief of symptoms. Colonoscopy planned on day 6 was postponed due to acute delirium, which required the initiation of a new anti-psychotic. Colonoscopy on day 28 showed a 10 cm area of non-bleeding ulcerated mucosa at the splenic flexure. Histopathology reports which became available 1 week later showed colonic mucosa with ulceration, granulation tissue, acute inflammation, and rare CMV-positive cells. HIV test which was then obtained was negative, and CMV DNA PCR was 52 IU/ml. She was subsequently started on Valgancyclovir and discharged without any acute events with a plan for a follow-up colonoscopic examination.
Discussion: CMV is a common virus with positive serology in upwards of 2-thirds of the general population. However, it rarely manifests in immunocompetent hosts. CMV colitis in immunocompetent hosts has been described mostly as a superinfection in patients with primary gastrointestinal disorders. Destruction of colonic mucosa from the ischemic colitis caused by clozapine likely allowed for CMV to establish the infection in our patient. It is thought that the anticholinergic manifestation in the gastrointestinal tracts which causes constipation and luminal dilation leads to decreased capillary circulation. Treatment usually involves discontinuation of the drug and supportive care.

S2177

Clostridium difficile-Like Diarrhea

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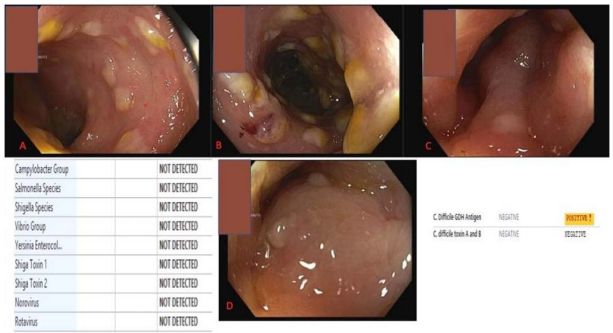
Introduction: *Clostridium difficile* is an important cause of diarrhea in immunosuppressed patients, recent use of antibiotics and in patients presenting from nursing facility. We present a patient with HIV, recently treated with Augmentin and started on a new medication (Juluca) for HIV presenting with watery diarrhea and abdominal pain.
Case Description/Methods: 62-year-old woman with HIV infection presented with abdominal pain and watery diarrhea for 2 days. She recently had ureteroscopy and was prescribed Augmentin which she completed about a week ago. She denied any GU complaints. She was started on Juluca (Dolutegravir/ Rilpivirine) for treatment of HIV one day before onset of symptoms. She had diffuse tenderness on abdominal exam and had leukocytosis (23.1k/mcl) with an absolute CD4 count of 568/mcl. On CT scan abdomen she had pancolitis with free fluid. She was found to have Clostridium antigen but without any toxin. On flexible sigmoidoscopy she had lesions shown in the **Figure**. Erythematous, edematous mucosa and inflamed plaques were seen on ulcerated mucosa with narrowing of sigmoid colon. No pseudomembranes or cytological atypia was seen on histopathology. Specimen culture did not show *C. difficile*.
Discussion: There are multiple causes of inflammatory diarrhea in an immunocompromised host with HIV. Previous infection with *C. difficile* and recent use of antibiotics increase the risk of *C. difficile* diarrhea. As per the center of disease control, about a half a million people are infected with *C. difficile* annually and one in 6 patients will get recurrent infection in 2 to 8 weeks. Our patient presented with multiple risk factors including history of *C. difficile*, HIV and recent use of antibiotics. The images of sigmoidoscopy were suggestive of pseudomembranous colitis though the tissues without any pathological or microbiological evidence. It highlights the importance of considering other non infectious causes of inflammatory diarrhea like medications. Dolutegravir/ rilpivirine are new class of medications (Integrase inhibitors). In a study by Curtis et al less than 2% of cases had diarrhea but none were severe enough o warrant discontinuation of therapy. Our patient had severe symptoms and required discontinuation of Juluca with regression of his symptoms.



[2177] **Figure 1.** A and B- Images of recto-sigmoid showing pseudomembranes in an edematous, erythematous colon. C,D - Marked narrowing of the sigmoid colon.

S2178

A Case of HIV-Associated Eosinophilic Gastroenteritis

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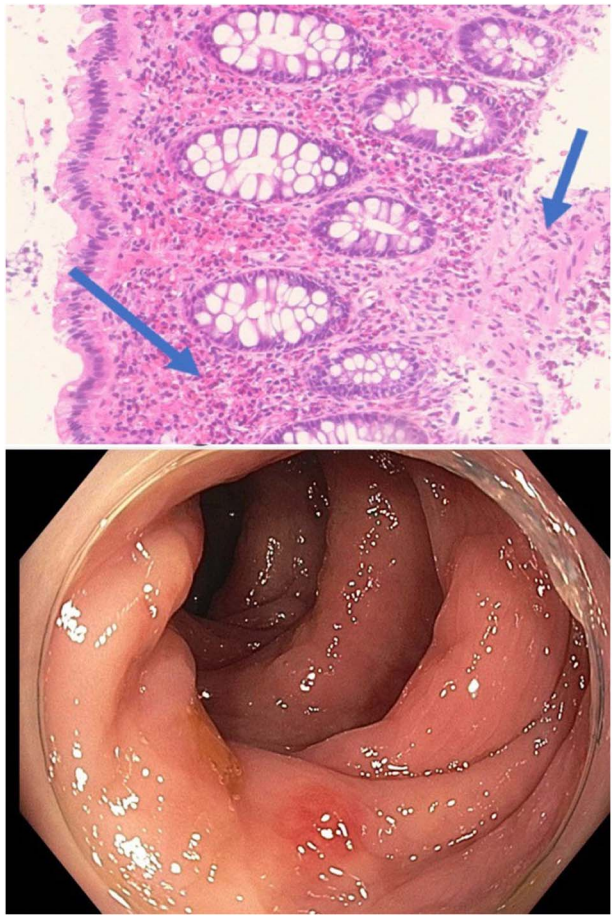
Introduction: Primary eosinophilic gastroenteritis (EoGE) is a rare inflammatory disorder of the large bowel. A variety of factors including food allergies, infections, malignancy and medications have been associated with EOGE though exact pathogenesis is unclear. We present a unique case of a 33-year-old patient with HIV diagnosed with biopsy-proven eosinophilic esophagitis and colitis.
Case Description/Methods: A 33-year-old patient with HIV on ART presented to clinic with a malaise and epigastric abdominal pain. A CT scan revealed colitis and duodenitis and was prescribed antibiotics. Symptoms progressed and she arrived to the ED where repeat imaging revealed worsening small and large bowel thickening with fat stranding. Laboratory workup was remarkable for peripheral eosinophilia with absolute eosinophils of 10.95 K/UL (prior range 0.2-1.4 K/UL) and an elevated IgE. Initial infectious workup was negative. She subsequently underwent endoscopic evaluation. Upper endoscopy revealed localized erosions in the prepyloric region and scattered spots of erythematous mucosa in the sigmoid colon. Histopathological assessment of biopsies was suggestive of eosinophilic esophagitis and colitis. A Strongyloides IgG was mildly positive at 1.0 (reference range < 0.9 = negative). Ivermectin was initiated for 2 days with a prednisone taper. Her symptoms essentially resolved in 2 days and eosinophil count dropped from 13.92 to 0.85 K/UL (Figure).
Discussion: We present an unusual case of HIV-associated, eosinophilic gastroenteritis diagnosed on biopsy ($>/=$ 15 eosinophils per high power field). Literature describing HIV-associated EOGE is rare. One case of eosinophilic colitis associated with emtricitabine/tenofovir has been published and another case has reported changing ART resulting in the resolution of symptoms. Our patient had been stable on bictegravir-emtricitabine-tenofovir for $>$ 3 years prior to her abrupt onset of symptoms. It is not clear if the Strongyloides was related as the patient had no previous testing; though had no recent history of travel abroad or other likely recent exposures. HIV patients are twice as likely to have EoE vs non-HIV patients. In patients with HIV presenting with relapsing and remitting abdominal pain with marked eosinophilia, EoGE should be considered.



[2178] **Figure 1.** Presence of colonic eosinophilia (arrows) with associated erythema.

S2179

A Case of Anorectal Junction Melanoma

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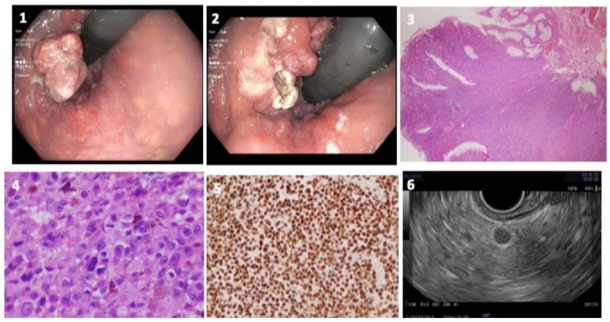
Introduction: Malignant melanoma of the rectum is an extremely rare disease that is aggressive in nature and often at an advanced stage at the time of diagnosis. We present a case of malignant melanoma of the rectum that was diagnosed on endoscopic polypectomy and staged with endoscopic ultrasound.
Case Description/Methods: A 66-year-old, asymptomatic, White female underwent a surveillance colonoscopy. She was noted to have a 20 mm semi-pedunculated rectal polyp (Figure 1), which was piecemeal resected using a hot snare (Figure 1.2). Resection and retrieval were complete. Pathology showed malignant melanoma involving the anal and anorectal junction mucosa (Figure 1.3 and 1.4). The tumor approached the inked resection margin. Immunohistochemical stains were positive for Sox-10 (diffuse and strong) (Figure 1.5), Melan-A (focal), S-100 (focal), and tyrosinase (focal). Stains were negative for pan keratin, CK7, CK20, CDX2, P40, CD56, synaptophysin, CD45, and CEA. EUS performed 3 weeks later showed linear scar just above the dentate line with no residual polyp tissue. Rectal wall at the polypectomy site was thickened without any tumor infiltration and a normal appearing muscular propria. Patient was noted to have 2 hypoechoic lymph nodes 11.4 mm X 8.5 mm and 6.4 mm X 6.0 mm, 8 cm from anal verge (Figure 1.6). Fine needle Aspiration biopsy of the lymph nodes was performed. Pathology from the lymph node showed presence of malignant melanoma. Immunostain positive for MART-1 and SOX-10 but negative for HMB-45. PET/CT did not show any regional or distant metastatic disease. Tumor was staged as Stage III malignant melanoma.
Discussion: Malignant melanoma of the distal rectum and anorectal junction is an aggressive and a rare presentation of this disease. It is mostly diagnosed in White women in fifth to sixth decade. Melanocytes are located at the anal transition zone and squamous zone with most anorectal melanomas arising from the dentate line and located at the anal verge or in the anal canal. Due to the hidden location and late onset of symptoms, many of these tumors are advanced by the time of diagnosis. As this case illustrates, tumors are often 20 mm or bigger in size with nodal involvement. Hence the 5 year disease free survival in patients with metastatic disease is only 16%.



[2179] **Figure 1.** 1: Colonoscopy image showing rectal polyp. 2: Colonoscopy image showing post rectal polypectomy site. 3: Pathology showing malignant melanoma involving the anal and anorectal junction mucosa. 4: Pathology showing sheets of melanocytic tumor cells. 5: Pathology showing brown nuclear staining with SOX-10 immunoperoxidase marker. 6: EUS image showing hypoechoic lymph node.

S2180

***Strongyloides*-Associated Eosinophilic Colitis: Implications for Managing Renal Transplant Patients**

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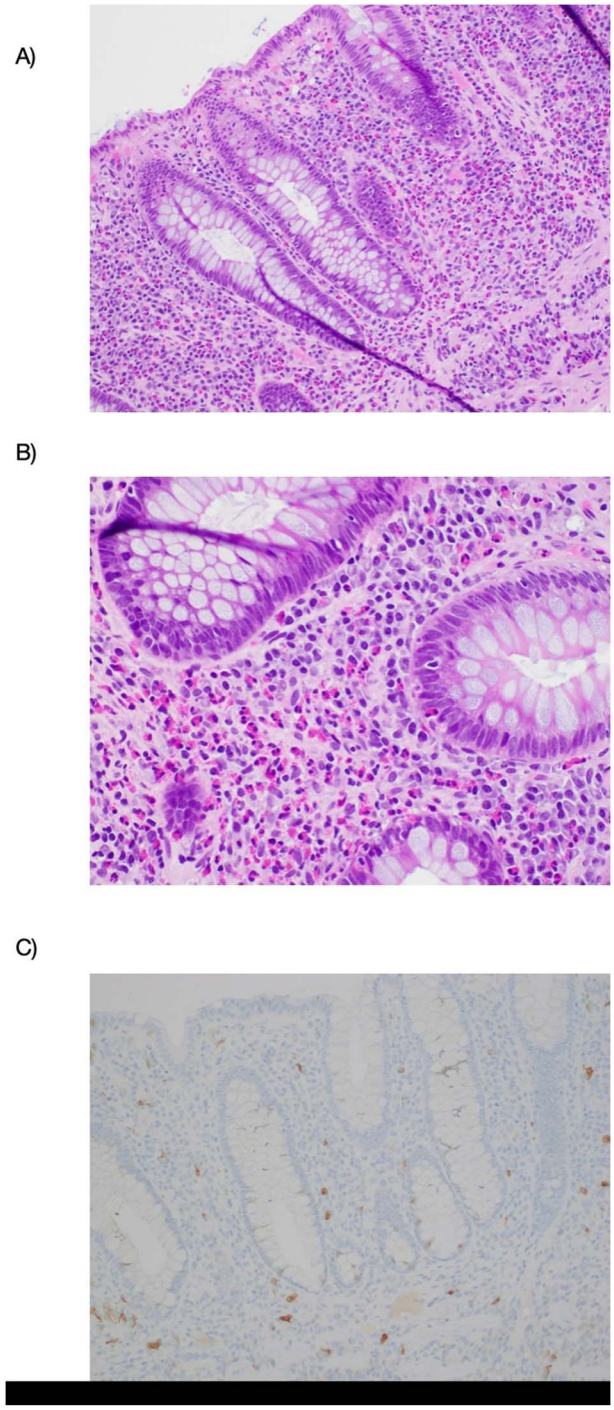
Introduction: *Strongyloides stercoralis* is a parasitic intestinal nematode that is often asymptomatic but can cause life threatening hyperinfection syndrome (HIS) and disseminated disease (DD). Solid organ transplant patients require careful evaluation. Diagnostic challenges may allow patients to proceed to transplantation, increasing risk for HIS. These infections prove difficult to identify and treat, with high mortality rates.

Case Description/Methods: A 57-year-old man with CKD on peritoneal dialysis and chronic pancreatitis complicated by pseudocyst formation with cyst gastrostomy undergoing renal transplant evaluation presented for chronic abdominal pain, daily diarrhea, postprandial dyspepsia and 35lb weight loss over 2 years. He required multiple hospitalizations and endoscopic evaluation without clear diagnosis. He was clinically stable on pancrelipase for presumed exocrine pancreatic insufficiency. Labs showed lipase 41, triglycerides 173, IgG4 32, WBC 9.6 with eosinophils 100/μL, Iron 79. Colonoscopy showed granular transverse colonic mucosa that was biopsied. Pathology showed intraepithelial and lamina propria eosinophils. Immunohistochemical staining for CD117 did not show increased mast cells. Follow up tryptase was 12.9 and eosinophils 660/μL. IgA 147, IgG 2253 and IgM 50. IgE was not assessed. Stool studies and allergy skin testing were negative. Strongyloides IgG antibody returned positive. He was treated with Ivermectin 15mg (200mcg/kg/day) induction for 2 days followed by Ivermectin 15mg for 2 days, 14 days later. Subsequent laboratory testing confirmed resolution with improvement in peripheral eosinophilia and with resolution of his diarrhea (Figure).

Discussion: *Strongyloides* infection is well described in solid organ transplant patients. Larvae introduce enteric bacteria or fungi into the blood causing electrolyte disturbances, colonic ulceration, alveolar hemorrhage, severe sepsis and death. Morbidity and mortality, reaches 50% for HIS and 70% for DD. Diagnosis requires larvae identification but false negatives are high. Duodenal aspirates have better sensitivity at 76%. Serologic testing cannot distinguish between prior or active infection. A gelatin particle indirect agglutination test may be more reliable. First line treatment with Ivermectin induction with later treatment effectively eradicates organisms with cure rates between 94-100%. In our case, early detection may have prevented HIS and highlights the significance of early detection, particularly in pre-transplant patients.



[2180] **Figure 1.** Colonic eosinophilia (A) Increase in eosinophils within the mucosa and submucosa with preserved crypt architecture (H&E stain; 200X) (B) Intense focus of lamina propria eosinophilia accompanied by intraepithelial eosinophils (H&E stain; 400x) (C) Immunostaining for CD117 highlights rare mast cells (IHC stain; 200X).

S2181

Pseudomyxoma peritonei - "Jelly Belly": To Tap or Not?

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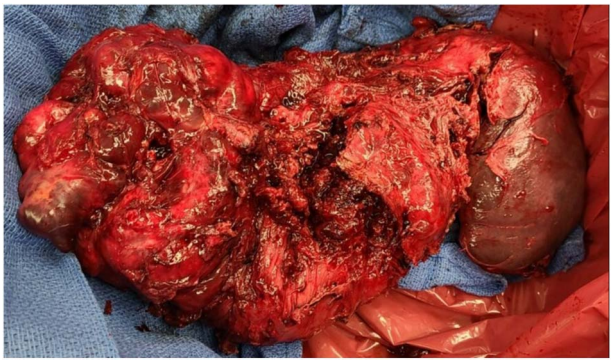
Introduction: Mucinous adenocarcinomas of the appendix are defined as epithelial neoplasms often causing cystic dilation of the appendix due to accumulation of gelatinous material. Pseudomyxoma peritonei is an extremely rare complication of appendiceal mucinous adenocarcinomas with an estimated incidence rate of one to 2 people per million per year. Here-in we present a unique case of enterocutaneous fistula formation secondary to percutaneous biopsy of an enlarging omental mass in the setting of pseudomyxoma peritonei.
Case Description/Methods: A 50-year-old male with a past medical history of metastatic appendiceal mucinous adenocarcinoma presented to the ED with abdominal pain, nausea, and vomiting. The patient had previously undergone 2 debulking surgeries over the past 2 years prior to admission and has since been on FOLFOX therapy. Due to the COVID pandemic, the patient did not follow-up in the 2 years period from previous admission. A CT scan was now notable for a new enlarging omental mass despite the recent debulking surgery. Given the enlarging mass, a decision was made to pursue a percutaneous biopsy of

the mass due to concern for potential new malignancy. Two weeks after the biopsy, the patient presented to our facility due to worsening erythema and drainage from the biopsy site. The patient met SIRS criteria, thus broad-spectrum antibiotics were initiated. A CT of the abdomen and pelvis with oral and IV contrast was obtained, which demonstrated a 9 cm abscess or continuation of intra-abdominal multilocular cystic lesion/ pseudomyxoma peritonei. The surgical team was consulted. Patient had 100 cc of purulent and mucinous drainage expressed from biopsy site. The patient was then placed for transfer to a hospital capable of advanced surgical management for evaluation and potential resection of fistula formation. The patient had a successful reductive surgery and intraoperative chemotherapy (Figure).
Discussion: Given the rarity of pseudomyxoma peritonei, appropriate management is not always straightforward. A literature review yielded no previous reports of enterocutaneous fistula as a complication of percutaneous drainage in the setting of pseudomyxoma peritonei. We recommend that percutaneous drainage not be sought in individuals with this diagnosis due to potential for fistula formation.



[2181] **Figure 1.** Resected omental mass that led to fistula formation post percutaneous biopsy. Cytogenetics yielded that this tumor was of a different genotype than the patient's original cancer.

S2182

A Case of Colonic Malakoplakia

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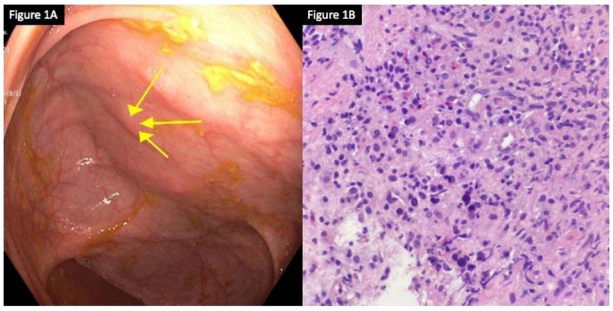
Introduction: Malakoplakia is a rare histiocytic inflammatory response that is usually found in the urinary tract. Gastrointestinal involvement is considered the second most common location affected and is a result of dysfunctional macrophages. Histopathology is characterized by granular histiocytes with Micahelis-Gutmann bodies. Although usually an incidental finding, Malakoplakia is associated with immunosuppressive therapy, colorectal carcinoma and infectious diseases.
Case Description/Methods: A 54-year-old man with a pmhx of alcohol use disorder was referred to clinic for acute, asymptomatic liver enzyme abnormalities. Laboratory findings were significant for AST of 270 U/L, ALT of 63 U/L, ALP of 65 U/L, and total bilirubin of 0.3 mg/dL. Further workup showed positive hepatitis B surface antigen, reactive hepatitis B core antibody and hepatitis B DNA by PCR was 172K IU/mL. Patient underwent screening colonoscopy which revealed a 2 mm sessile polyp in the cecum (Figure A). Histological examination of the polyp showed von-Hansemann cells containing Michaelis-Gutmann bodies, which is diagnostic for malakoplakia (Figure B).
Discussion: The first report of colonic malakoplakia was described by Terner and Lattes in 1965 and usually involves the ascending colon, sigmoid colon and rectum. Clinical manifestations of colonic involvement range from asymptomatic to abdominal pain, fever, diarrhea and rectal bleeding. The lesion is characterized by von-Hansemann cells which are aggregates of histiocytes with eosinophilic cytoplasm and intracytoplasmic Michaelis-Gutmann bodies. Pathogenic mechanisms include a causative organism, altered immune response and phagocyte disfunction. *Escherichia coli* is the most common isolated pathogen found in 90% of patients with malakoplakia. These chronic bacterial infections are due to suspected abnormal macrophage function resulting in the inability to break down bacteria. The most susceptible include immunosuppressed patients who are post-transplant or have an untreated systemic disease such as chronic hepatitis. Antibiotic therapy, immunotherapy modification and surgical resection are the mainstay of management. While most cases of malakoplakia are diagnosed as incidental findings on screening colonoscopy, there does exist an associate with colorectal adenocarcinoma. Given the potential for significant morbidity if left untreated, malakoplakia diagnosed on incidental screening should prompt a work up for systemic infections, immune compromising diseases and malignancy.



[2182] **Figure 1.** A: Two mm cecum polyp denoted by yellow arrows. Figure B: High-power view of Malakoplakia (60x). Macrophages containing basophilic targetoid structures, known as Michaelis-Gutmann bodies.

S2183

A Case of Colitis From Intestinal Spirochetosis

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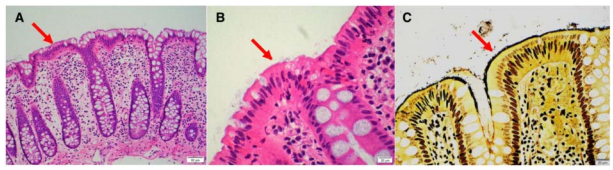
Introduction: A thirty-year-old homosexual male with a history of Human Immunodeficiency Virus (HIV), Gastroesophageal Reflux Disease (GERD), and syphilis presents to clinic with chronic diarrhea from indeterminate colitis and is found to have intestinal spirochetosis.
Case Description/Methods: Patient with a history of HIV, compliant with antiviral therapy on elvitegravir, cobicistat, emtricitabine, and tenofovir with his last Cluster of Differentiation (CD4) count of 771 and HIV quantitative count less than 20 presents to clinic with continued diarrhea for the past year. Initial workup included a colonoscopy showing focal active colitis in the left colon with biopsy of the ascending and transverse colon showing mild patchy lamina propria inflammation where he was started on mesalamine 1.5 grams daily. Patient also with a history of syphilis that was treated with penicillin 6 months prior to presentation with recent Rapid Plasma Reagin (RPR) titer 1:16. Social history was notable for active sexual activity with one, HIV positive male partner as well as current tobacco and marijuana use. He reports 4-5 bowel movements per day and recent rectal condyloma with pathology showing low-grade squamous intraepithelial lesion. Vitals, physical exam, and labs were unremarkable. Patient underwent a follow up colonoscopy with findings significant for nodular mucosa with ulceration in the rectum as well as rectal, sigmoid, descending, and right colon biopsies showing intestinal spirochetosis (Figure). Patient was started on metronidazole for a 10-day therapy with improvement.

Discussion: Intestinal spirochetosis is characterized by spirochetes on the luminal surface of colorectal mucosa with a higher prevalence in homosexual men and HIV-infected patients. Previous studies found an association with diverticular disease and intestinal bowel disease with diarrhea as a common presenting symptom seen in our patient. The Brachypiracea family are the most common organisms associated with intestinal colonization with co-infection with other enteric pathogens including Helicobacter pylori being common. Endoscopic mucosal appearance can be variable ranging from normal to mucosal erosions with diagnosis made with biopsy showing a diffuse fringe along the border of the intercryptal epithelial layer (Figure) and metronidazole being an effective treatment. When an immunocompromised patient with high risk behaviors presents with chronic diarrhea, intestinal spirochetes should be considered on the differential diagnosis.



[2183] **Figure 1.** A, B: Hematoxylin and Eason Stain (H&E) showing intestinal spirochetes at 20x magnification and 40x respectively showing intestinal spirochetes (red arrow). **Figure** C: Silver Steiner stain showing intestinal spirochetes (red arrow).

S2184

A Case of Colonic Perforation After CT Colonography

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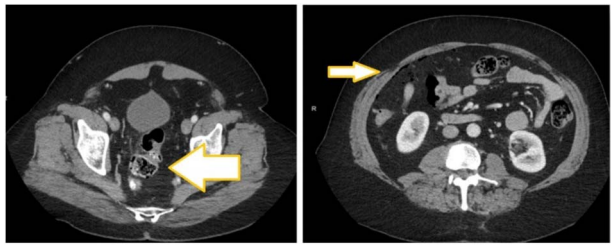
Introduction: CT colonography is increasingly used in patients with failed initial colonoscopy. Although it is relatively considered a safe procedure but can have serious rare complications with significant morbidity and mortality. We present a case of a patient with failed colonoscopy due to severe diverticular disease who was referred for a CT colonography.
Case Description/Methods: 70 years old male with the history of hypertension, dyslipidemia and recurrent diverticulitis who underwent colonoscopy for diagnostic purposes after recent episode of diverticulitis 3 months ago. Patient last colonoscopy 5 years ago showed extensive diverticular disease and one benign colonic polyp. Colonoscopy was attempted however despite using pediatric colonoscope we were not able to pass the sigmoid colon because of severe angulation and luminal narrowing. After discussion with the patient, decision was made to refer for CT colonography which was performed 2 months later which showed severe sigmoid diverticulosis. Note that the colon was insufflated with carbon dioxide gas.One day after the procedure, patient presented to the outside hospital with worsening abdominal pain and was found to have sigmoid perforation & air under diaphragm (**Figure**). He was taken to the OR urgently and underwent sigmoid resection with creation of colostomy with reversal later. Pathology was negative for malignancy but showed diverticulosis, diverticulitis and serosal adhesions.
Discussion: CRC is the third most common cause of cancer and second leading cause of death from cancer. There are range of screening tests available for CRC screening including stool test, colonoscopy and radiological test including CT colonography. Although CT colonography is relatively a benign procedure but occasionally can cause serious complications. A retrospective analysis by Burling et al. found incidence of colonic perforation 0.08% after analysis of 17067 colonography examinations, while symptomatic perforation rate was 0.03%. (1) The data on colonic perforation after CTC is low (0.005%-0.03%) compared to colonoscopy (0.06%-0.19%) (2). Although CTC is a safe procedure we suggest that prior to referral for this procedure, a detailed risks benefits discussion should be held between the patient and physician.



[2184] **Figure 1.** Left: Sigmoid colon perforation. Right: Free air under diaphram.

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S2185

A Case of a Cecal Abscess Masquerading as Malignancy and Appendicitis

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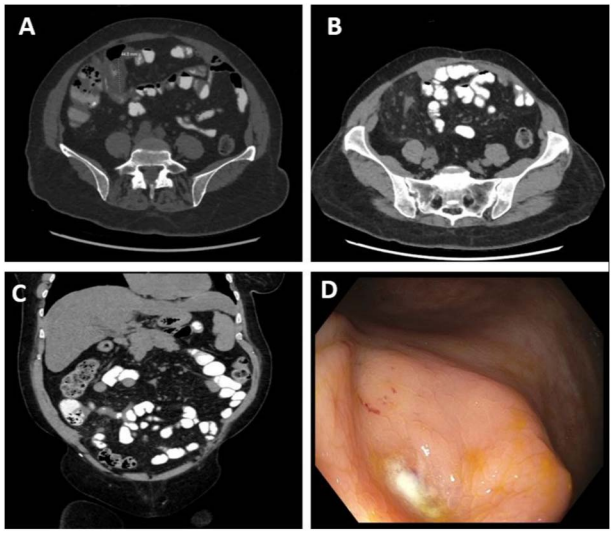
Introduction: A cecal abscess is rare in clinical practice and when present occurs most often in the setting of appendicitis, diverticulitis, or inflammatory bowel disease.[1] Here, we present a case of a cecal abscess without obvious etiology where imaging was suggestive of malignancy and clinical presentation and endoscopic findings were suggestive of acute appendicitis.
Case Description/Methods: A 54-year-old women presented with 1 day of acute right lower quadrant (RLQ) abdominal pain associated with nausea, vomiting, and fevers. Her notable past medical history included cirrhosis of the liver due to non-alcoholic steatohepatitis (NASH), type II diabetes mellitus complicated by gastroparesis, prior colon polyps with family history of colon cancer. Notable past surgical history included subtotal gastrectomy and cholecystectomy. On exam, her vitals included heart rate 103 beats per minute, blood pressure 161/85 mm Hg, and temperature 98.6 °F. She appeared uncomfortable, abdominal exam revealed RLQ tenderness with rebound and right inguinal lymphadenopathy. Rovsing's sign was negative. Labs revealed WBC 5,400/cmm, Hb 12.6 gm/dl and platelet count of 172,000/cmm. CT abdomen and pelvis showed diffuse circumferential wall thickening of the base of the cecum including appendix, mild wall thickening of the terminal ileum, mild periappendiceal stranding and several small nodes in the right lower quadrant (Figure A-C). Imaging findings were concerning for malignancy so a colonoscopy was pursued. Colonoscopy revealed normal colonic and terminal ileal mucosa but was notable for pus seen emanating from the appendiceal orifice (Figure D). Given this finding, the patient went to the operating room out of concern for appendicitis. She had a laparoscopy which showed a 1.5 – 2.0 cm mass at the base of the appendix and a right hemicolectomy was done. Pathology showed cecal intramural acute and chronic inflammation, extensive necrosis, abscess formation, serosal adhesion and acute serositis. The patient had an uneventful recovery.
Discussion: This case highlights a unique presentation of a cecal abscess masquerading as malignancy and appendicitis. The endoscopic finding of pus emanating from the appendiceal orifice was unique and led to a surgical diagnosis. This case emphasized the importance of maintaining a broad differential when evaluating a patient.



[2185] **Figure 1.** A) Axial image showing thickening of the base of the cecum. B) Axial image showing thickened appendix, periappendiceal stranding. Multiple scattered mesenteric lymph nodes, reactive. C) Coronal image showing thickening of the terminal ileum. D) Colonoscopy revealing pus emanating from the appendiceal orifice.

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S2186

A Case of Abdominal Cocooning From Appendiceal Carcinomatosis

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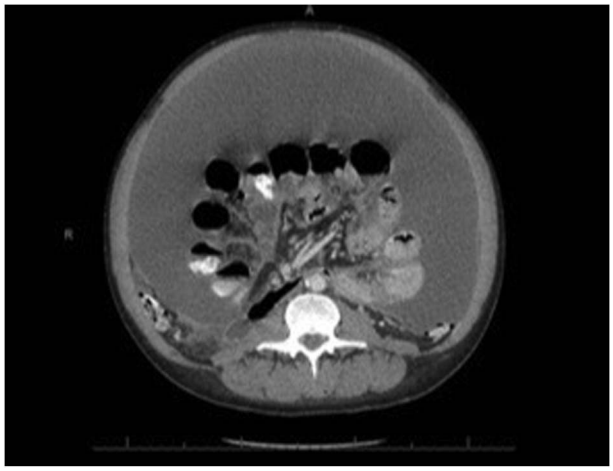
Introduction: Abdominal cocooning is a rare radiologic finding where thickened peritoneal membrane surrounds the intestines causing bowel to become trapped and adhered to each other. This is usually a result of chronic inflammation and can be associated with infections like tuberculosis (TB) or chronic processes like sarcoidosis, peritoneal dialysis, VP shunts, or carcinomatosis. Patients typically present with intractable nausea, vomiting, abdominal pain and distension. Here, we present a case of abdominal cocooning with recurrent ascites secondary to appendiceal carcinomatosis.
Case Description/Methods: 41-year-old male with history of remote polysubstance use (IV and alcohol) and incarceration who presented to the ED with progressively worsening abdominal distension and intractable nonbloody, nonbilious emesis. This patient had been hospitalized for a similar presentation weeks prior. At that time, he was found to have large volume ascites (SAAG 1.1, 774 nucleated cells, 3% segs) and was diagnosed with alcoholic cirrhosis though RUQ ultrasound with liver doppler and lab work were normal. CT abdomen and pelvis showed "peritoneal thickening concerning for peritonitis" (Figure) and the patient was treated for presumed spontaneous bacterial peritonitis. He presented to our facility weeks later with recurrent ascites (SAAG 1.2, 795 nucleated cells, 1% segs). Triphasic liver CT showed findings that were "highly suspicious for encapsulating peritoneal sclerosis/abdominal cocoon". Ultimately, a peritoneal biopsy was performed given concerns for carcinomatosis vs. TB infection. Final pathology showed goblet cell adenocarcinoma with presumed appendiceal origin. Colonoscopy was unsuccessful due to cementing of the peritoneum. Patient was not a candidate for chemotherapy due to having severe malnutrition requiring the initiation of total parenteral nutrition. He was discharged with outpatient GI oncology follow up.
Discussion: Although cirrhotic ascites is commonly diagnosed and treated by physicians, it is vital that clinicians are also aware of the diagnostic findings of noncirrhotic ascites. In this case, the degree of WBC count elevation with low segmented cells likely indicated TB or carcinomatosis at the initial presentation. Familiarity with imaging findings of abdominal cocooning may have also contributed to an expedited diagnosis. This case reiterates the importance of questioning and further exploring symptom etiologies when routine workup is not consistent with common causes of an everyday complaint.



[2186] **Figure 1.** Peritoneal thickening consistent with abdominal cocooning with large-volume ascites.

S2187

A Case of GI Tract Involvement in a Patient Presenting With Granulomatosis With Polyangiitis

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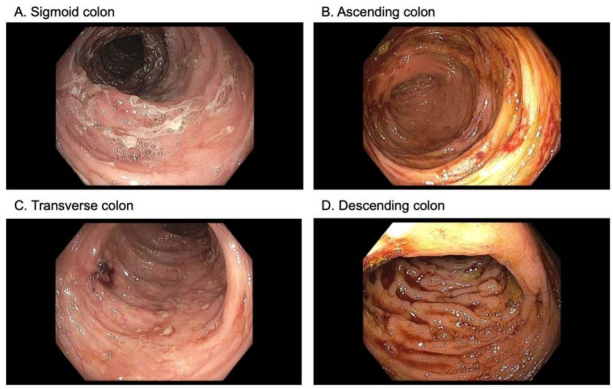
Introduction: The differential for colitis is broad, including infectious, ischemic, diverticulitis, inflammatory bowel disease and vasculitis etiologies. In this report, we present the case of a patient who presented with acute anemia in the setting of colitis along with chronic sinusitis, palpable purpura, and acute renal failure who was eventually found to have granulomatosis with polyangiitis (GPA).
Case Description/Methods: A 51-year-old man with a 3-month history of sinusitis refractory to antibiotics presented with a 2-week history of diarrhea with intermittent melanic stools and a nonpainful, nonpruritic palpable purpuric rash on his legs, feet (including soles) and palms. He was hemodynamically stable and abdominal exam was benign. His laboratory workup was significant for a leukocytosis of 18.2 (he had previously been started on steroids), hemoglobin 8.4g/dL (baseline 15g/dL), and creatinine of 1.8mg/dL from baseline 1.0mg/dL. He had no personal or family history of inflammatory bowel disease, other autoimmune disorders, or malignancy. Colonoscopy revealed moderate to severe diffuse friable, ulcerated mucosa with punched out ulcers in the sigmoid, descending, transverse, and ascending colon (Figure). Biopsies revealed ulcerated mucosa without features of inflammatory bowel disease. Subsequent skin biopsy revealed leukocytoclastic vasculitis. Given his constellation of symptoms, he was presumed to have Henoch-Schonlein purpura. However, renal function declined and renal biopsy was pursued, which showed pauci-immune necrotizing crescentic glomerulonephritis. Subsequent workup showed positive c-ANCA / PR3, consistent with granulomatosis with polyangiitis. He was switched from PO to IV high dose steroids and initiated on rituximab and plasmapheresis with clinical resolution of symptoms.
Discussion: Classically, GPA is thought to be a disease affecting the lungs, skin, and kidney. GI tract involvement in GPA is rare, accounting for less than 10% of all cases. The diagnosis of GPA can be difficult as many initial symptoms can mimic other vasculitides or inflammatory bowel disease in the setting of GI tract involvement. However, prompt recognition of this disease is critical as early renal biopsy can confirm the diagnosis. In our patient, the combination of positive c-ANCA / PR3 with renal failure in the setting pauci-immune glomerulonephritis allowed to identify GPA and start therapy.



[2187] **Figure 1.** Colonoscopy showing moderate to severe diffuse friable, ulcerated mucosa with some bleeding. Punched out ulcers were noted in the sigmoid, descending, transverse, and ascending colon, as well as in the cecum with distal sigmoid and rectal sparing.

S2188

***Streptococcus Bovis Bacteremia* and Endocarditis Leading to the Diagnosis of Synchronous Colon and Appendiceal Adenocarcinoma**

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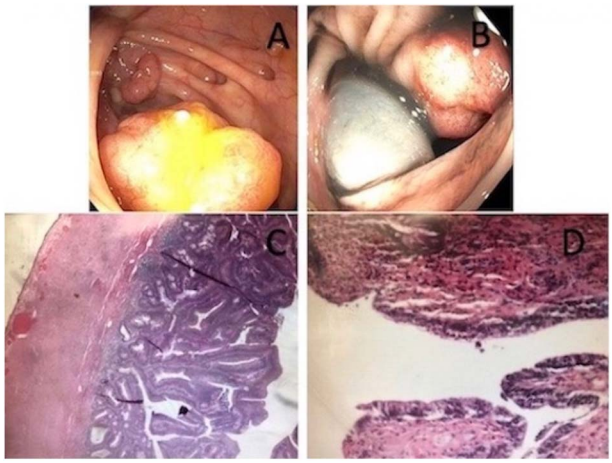
Introduction: Colon adenocarcinoma has been shown to be associated with appendiceal adenocarcinoma and *Streptococcus bovis* infection. An association between appendiceal cancer and *S. bovis* infection has not been reported. This is a case of *S. bovis* bacteremia prompting colonoscopy and subsequent diagnosis of colon adenocarcinoma and incidental diagnosis of appendiceal adenocarcinoma.
Case Description/Methods: A 77-year-old male with a history of metabolic syndrome, coronary artery bypass graft surgery, abdominal aortic aneurysm, heart failure with preserved ejection fraction, and aortic stenosis came to the emergency department for dyspnea and chest pressure. Vital signs were stable with a temperature of 103.2 °F. Physical exam revealed diffuse lung rales and bilateral lower extremity trace edema. Labs are show in the Table. ECG was equivocal for acute myocardial infarction and cardiac catheterization was negative. Blood cultures grew *S. bovis*. TTE showed no valvular vegetations. TEE showed a mitral valve vegetation consistent with infective endocarditis (IE). Lower extremity vein thrombosis was diagnosed; anticoagulation was started which led to anemia and melena. Colonoscopy showed a large mass in the ascending colon (AC), a large villous appearing mass in the sigmoid colon (SC), multiple polyps, and severe diffuse diverticulosis (Figure A, B). CT abdomen/pelvis showed no evidence of metastasis. He underwent SC and AC resections. Pathology of the SC showed tubulovillous adenoma with high-grade dysplasia and negative for submucosal invasion (Figure C). Pathology of the AC showed well-differentiated appendiceal adenocarcinoma of the distal appendix invading the muscularis propria with appendiceal serosa and fat negative for invasion. Pathology of the AC also showed intramucosal adenocarcinoma without lymphovascular space invasion (Figure D). Lymph nodes were negative for metastasis.
Discussion: Appendiceal cancer is rare. It affected only 2900 individuals in the US from 2012-2016. It is usually diagnosed after appendectomy for appendicitis. It has been proposed that patients with appendiceal adenocarcinoma carry an increased risk of colon adenocarcinoma and should be screened with colonoscopy at time of diagnosis. In this case, *S. bovis* bacteremia and IE prompted a colonoscopy. It remains unknown if there is an association between appendiceal adenocarcinoma and *S. bovis* infection. This report illustrates one case of concomitant colon and appendiceal adenocarcinoma with *S. bovis* bacteremia and IE.



[2188] **Figure 1.** Image A: Colonoscopy image showing ascending colon mass with diverticulosis and other polyps. Image B: Colonoscopy image showing sigmoid colon mass. Image C: Histological image of sigmoid colon resection showing tubulovillous adenoma with high-grade dysplasia. Image D: Histological image of right hemicolectomy specimen showing in-situ adenocarcinoma.

Table 1. Laboratory Values

Laboratory test	Value	Reference range
Troponin I	4.270	0.000-0.450 ng/mL
Lactic acid	2.2	0-2 mmol/L
WBC	9.00	4.40-11.00 $10^3/\mu L$

S2189

***Campylobacter jejuni*: A Previously Unreported Cause of Toxic Shock Syndrome**

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Introduction: *Campylobacter jejuni* is one of the most common bacterial causes of gastroenteritis. This spirochete commonly presents as a self-resolving acute watery diarrhea; however, *C. jejuni* can have life-threatening sequelae - such as Guillain Barre Syndrome. We report a case of Toxic Shock Syndrome – secondary to *C. jejuni*.
Case Description/Methods: A 44-year-old African American female presented with shortness of breath associated with cough and weakness for 3 days. The patients' symptoms were preceded by 5 days of bloody diarrhea. She denied any chronic conditions, sick contacts, or recent travel. She works at a nursing home. On admission, the patient wad febrile with a heart rate of 136 and respiratory rate of 22. Physical examination revealed tachypnea and diffuse abdominal tenderness and guarding. The lungs were clear to auscultation bilaterally. Chest x-ray showed no acute cardiopulmonary disease. CTA of the chest ruled out pulmonary emboli but showed a possible right lower lobe pneumonia. CT of the abdomen and pelvis was normal except for mild splenomegaly. The patient was started on intravenous (IV) fluids and treated empirically for community-acquired pneumonia. On day 4, the patient complained of worsening lower extremity weakness and myalgia. She developed a fever to 104.9˚F (40.5˚C), hemoglobin of 6.8 g/dL, leukocytosis to 20,100 cells/mm3 , hyperbilirubinemia, and mildly elevated AST and ALT (Table). Right upper quadrant ultrasound was normal. On exam there was a diffuse, orange rash and bilateral crackles. The patient was now requiring nonrebreather mask and was encephalopathic and hypotensive. She was intubated and transferred to the ICU. On day 5, the patient developed purpura, thrombocytopenia, and a Nikolsky sign in the intergluteal cleft. A rectal tube was placed for hygiene, and stool cultures were obtained. Studies returned positive for *C. jejuni*. The patient was started on meropenem to cover for resistant strains of *C. jejuni*. She made a full recovery and returned to work.
Discussion: Our patient exhibited fever (104.9°F), diffuse erythrorderma, skin desquamation, hypotension and a constellation of gastrointestinal, mucosal, hepatic, and hematologic involvement. Thus, we are confident in the diagnosis of Toxic Shock Syndrome. The medical literature has only reported one case of Campylobacteriosis leading to Toxic Shock Syndrome – caused by *Campylobacter intestinalis*. This is the only reported case of *C. jejuni* causing Toxic Shock Syndrome.

Table 1. Notable Laboratory Findings

Notable Laboratory Findings					
Test	**Reference Range**	**Day 1**	**Day 4**	**Day 7**	**Day 10**
Hemoglobin	12.0 - 18.0 g/dl	8.6 g/dL	6.8 g/dL	8.9 g/dL	9.3 g/dL
White Blood Cell Count	4 – 10.5 x 103 cells/μL	10.6 x 10^3 cells/μL	20.1 x 10^3 cells/μL	52.6 x 10^3 cells/μL	28.5 x 10^3 cells/μL
Platelets	150-450 x 103 PLT/μL	196 x 10^3 PLT/μL	74 x 10^3 PLT/μL	81 x 10^3 PLT/μL	73 x 10^3 PLT/μL
Total Bilirubin	0.20-1.00 mg/dL	0.95 mg/dL	2.26 mg/dL	4.07 mg/dL	8.62 mg/dL
Direct Bilirubin	0.0-0.20 mg/dL	0.44 mg/dL	N/A	2.95 mg/dL	6.56 mg/dL
AST	15-37 Units/L	168 U/L	68 U/L	85 U/L	41 U/L
ALT	12-78 Units/L	128 U/L	51 U/L	42 U/L	50 U/L

S2190

A Case of Colorectal Signet Ring Cell Carcinoma Presenting as Ulcerative Recto-Sigmoiditis and Stricture

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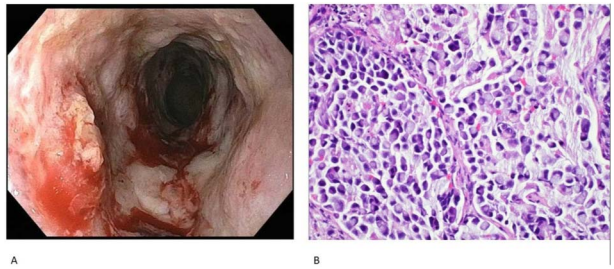
Introduction: Signet ring cell carcinoma accounts for about one percent of all colorectal cancers. It is an aggressive subtype of adenocarcinomas with the tendency for intramural spread and peritoneal carcinomatosis. Here, we reported a middle-aged male with circumferential colonic stenosis and inconclusive histology, found to have stage 4 colorectal signet ring cell carcinoma (SRCC).
Case Description/Methods: A 41-year-old male without significant past medical history was referred to a gastroenterology clinic with bright red blood per rectum. Colonoscopy showed ulcerative recto-sigmoiditis with rectal bleeding, and there was stricture in the rectum, in the recto-sigmoid colon, and from anus to descending colon (Figure A). Biopsy was obtained from the stricture. The pathology revealed granulation tissue and abundant fibrinopurulent exudate showing small clusters, and individual atypical cells stained positive for CDX-2 immunostain. Unfortunately, the patient subsequently lost follow-up. Three months later, the patient was hospitalized for small bowel obstruction. CT showed markedly enlarged heterogeneous and edematous rectum, an abnormal mass within the posterior pelvis/rectum, retroperitoneal and pelvic lymphadenopathy with thickening and nodularity of the peritoneum. Biopsy was obtained from an inguinal lymph node with histological examination showing metastatic adenocarcinoma composed of poorly cohesive signet-ring cells (Figure B). Immunostains revealed that the neoplastic cells were strongly and diffusely positive for CDX2 and CK20 while negative for CK7, confirming a colorectal primary. Accordingly, the diagnosis of colorectal signet ring cell carcinoma was made.
Discussion: The colonoscopic findings of colorectal SRCC could be nonspecific as diffuse circumferential thickening, stricture, or ulcerations. Typical pathological features may not appear on the initial biopsy sample. Immunohistochemical testing could help increase diagnostic yield and early identification of cancer cells. Our case hallmarked the importance of close follow-up for abnormal diffuse stricture and ulcerations in the colorectal area. These lesions may need to be rebiopsied, co-screened with abdominal imaging, and undergo an immunohistochemical investigation to characterize pathology further.



[2190] **Figure 1.** A: Colonoscopy: An intrinsic inflammatory circumferential fibrosis friable severe stenosis measuring 20cm (in length) * 9 mm (inner diameter) was found in the rectum, in the recto-sigmoid colon, and from anus to descending colon. B: Hematoxylin & eosin stain of tissue from lymph node showed metastatic adenocarcinoma composed of poorly cohesive signet-ring cells.

S2191

A Case Report of Syphilitic Proctitis Mimicking Rectal Cancer

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Introduction: Syphilis rarely affects the gastrointestinal tract, and even more rarely manifests with lower gastrointestinal signs and symptoms. We report a rare case of syphilitic proctitis that presented with inguinal lymphadenopathy and pain with defecation mimicking anorectal malignancy.
Case Description/Methods: A 31-year-old male with a history of multiple, recent male sexual partners, sexually transmitted infections (STIs), anxiety, depression, and migraines presented to the emergency department with a 2-month history of left inguinal pain, perianal pain, and pain with defecation. His initial exam was notable for a palpable rectal mass and tender left inguinal lymphadenopathy. CT abdomen/pelvis demonstrated a markedly enlarged left inguinal lymph node measuring 3.9 x 2.7 x 3.1 cm with multiple enlarged perirectal and left internal iliac lymph nodes, radiographically concerning for metastatic disease. Colonoscopy revealed congested mucosa in the rectum and a palpable external rectal mass on digital rectal exam. He was tested for sexually transmitted diseases and was found to have a reactive RPR with a titer of 1:128 and positive T. pallidum antibodies. His biopsy resulted with findings of syphilitic proctitis and spirochetosis confirmed by treponema pallidum immunostain, consistent with secondary syphilis. He was treated with a 14-day course of doxycycline (due to penicillin allergy) with initial improvement in symptoms.
Discussion: Syphilis is an important public health issue with increasing cases in the United States over the last 20 years. Syphilis uncommonly affects the gastrointestinal tract, and even less commonly the lower GI tract. Syphilitic proctitis most often presents with pain on defecation, rectal bleeding, tenesmus, and diarrhea and is often difficult to distinguish from inflammatory bowel disease or malignancy. Given the rise in sexually transmitted infections, it is important for providers to be aware of this presentation, which requires a thorough sexual history and prompt testing if exposure is suspected, to prevent ongoing transmission and development of complications. Our case highlights the rare presentation of syphilis and the importance of screening for STIs in high-risk patients.

S2192

A Deadly Presentation of Constipation

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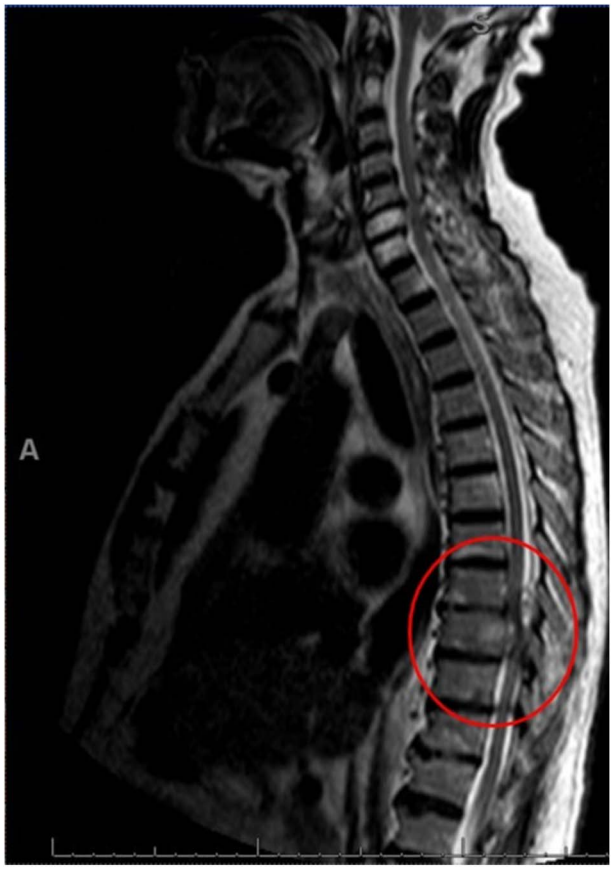
Introduction: Constipation is typically due to one of several functional GI disorders or medication use. However, it is important to remain vigilant for rarer causes of constipation that can have deadly outcomes. Here we describe one such diagnosis in a patient who presented with constipation and was found to have severe spinal cord compression due to a spinal mass.
Case Description/Methods: A 69-year-old male presented to the ER with 12 days of constipation. Prior to coming in he had been to numerous medical facilities because he was having back pain and worsening constipation. He had tried multiple laxatives and enemas without relief, CT imaging was done but did not show a source. In the ER he failed magnesium citrate, multiple fleet and tap water enemas and a manual fecal disimpaction, so the decision was made to admit him. He was seen by gastroenterology who started him on a gentle large bowel prep. The next morning, he was having watery bowel movements without stool, however legs were now weak to the point that he could not stand. A stat MRI showed severe cord compression at T8 and T9 due to a destructive lesion involving the T9 vertebral body (Figure). Within hours the patient was rushed to the OR for emergent spinal cord decompression. A posterior purple-gray epidural mass was removed, and later pathology revealed an undifferentiated pleomorphic sarcoma. He started on radiation, however was found to have multiple sites of metastasis, transitioned to hospice care, and passed away
Discussion: Due to innervation patterns in the spinal cord lesions above S1 can result in constipation. The first pathway is loss of sensation in the rectum resulting in loss of signal to evacuate and rectal distention. The second pathway is the loss of conscious external anal sphincter control, the inhibitory pathways remain activated, resulting in an inability to relax the anal sphincter and evacuate. With spinal cord compressions patients can also present with back pain, motor weakness, sensory deficits (i.e. saddle anesthesia) and loss of bladder function. Laxatives and enemas tend to be ineffective on these patients due to the external anal sphincter dysfunction and manual disimpaction has a higher success rate for symptom relief. Definitive management in these patients requires surgical intervention for decompression. When working up constipation it is important to ask a full review of symptoms to rule out non-primary causes and potentially catch red flags.



[2192] **Figure 1.** MRI of the thoracic spine showing destructive lesion of T9 with spinal cord compression.

S2193

A Case of Post-SARS-CoV-2 Colitis

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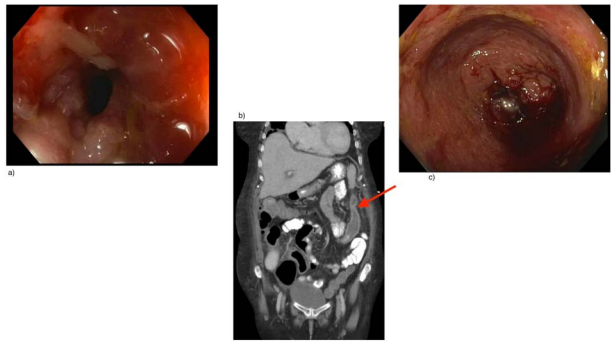
Introduction: We present a case of colitis following SARS-CoV-2 (SCV2) infection in a patient with simultaneous liver-kidney transplantation (SLK). SCV2 is primarily a respiratory illness, with unique consequences being identified on a regular basis. We believe that given the temporal relationship between SCV2 diagnosis and endoscopic findings, the viral infection played a role in our patient's disease pathogenesis.
Case Description/Methods: A 67-year-old White woman with a history of end-stage liver disease, complicated by hepatorenal syndrome, underwent a SLK. Following SLK, the patient's hospital course was complicated by SCV2 infection, 57 days after admission. The GI service was consulted prior to SCV2 infection for melena and performed an EGD which was non-diagnostic. GI was re-consulted 3.5 weeks after her SCV2 diagnosis due to worsening anemia, prompting a colonoscopy (CLN) that showed an obstructive stricture at the splenic flexure that could not be traversed. Colonic biopsies were non-diagnostic, showing granulation tissue, hemorrhage, and edema but no dysplasia or chronic inflammation. Infectious stool studies were negative, and biopsies were negative for CMV and HSV. CT abdomen/pelvis (A/P) performed immediately after CLN showed a colonic stricture (CS) at the splenic flexure in addition to terminal ileum/colonic inflammation, possibly secondary to fibrostenotic Crohn's disease. Of note, the patient had a normal CLN in 2017 and CT A/P done one day prior to SCV2 infection was unremarkable. Given the inconclusive diagnosis and implications of adding more immunosuppressants to the patient's existing post-transplant treatment regimen, a repeat CLN was performed to establish a firm diagnosis. This CLN was performed 9 days after the first and re-demonstrated a fibrostenotic CS at the splenic flexure with balloon dilation being performed to allow scope passage. The terminal ileum and entire colon had diffuse circumferential inflammation with erythema, friability, and shallow ulcerations. Biopsies showed architectural distortion and ulceration with markedly inflamed granulation tissue but once again, no chronic inflammation. With all other causes of acute colitis having been ruled out, the patient was diagnosed with post-SCV2 colitis (Figure).
Discussion: Our case demonstrates one of the less commonly seen gastrointestinal complications of this novel viral pathogen, and we believe that it will broaden the horizons of physicians with regards to the possible sequelae of SCV2 infection.



[2193] **Figure 1.** a) Colonoscopy showing stricture/colitis present at the level of the splenic flexure. b) Coronal CT-abdomen/pelvis with IV and PO contrast showing a segment of focal narrowing at the splenic flexure which could represent stricture (Red arrow). c) Colonoscopy showing colitis present in the ascending colon.

S2194

A Common Infection in a Highly Atypical Patient: Hematochezia From Cytomegalovirus Colonic Ulcer in a Young and Healthy Immunocompetent Patient

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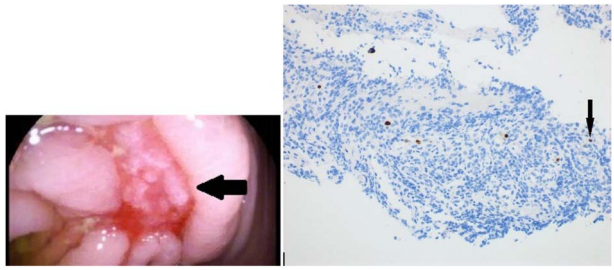
Introduction: Gastrointestinal (GI) cytomegalovirus (CMV) infections are far more common in immunocompromised as opposed to immunocompetent patients. Immunocompetent patients who do develop GI tract CMV infections are typically older with medical comorbidities. As such, descriptions of GI CMV infections in younger immunocompetent patients are lacking. Here we present a case of a GI CMV infection in a young and healthy immunocompetent patient.
Case Description/Methods: A 41-year-old male with hyperlipidemia and hypothyroidism presented with painless, intermittent hematochezia. He denied changes in bowel habits or appetite, abdominal pain, fevers, chills, fatigue, or weight loss. History was pertinent for insertive and receptive intercourse with one male partner. Medications were emtricitabine/tenofovir for pre-exposure prophylaxis, levothyroxine, and atorvastatin. Colonoscopy revealed a cecal ulcer surrounded by nodular-appearing mucosa that felt firm and was friable when biopsied (Figure). The remaining colon and terminal ileum were normal. There was no diverticulosis or hemorrhoids. Pathology was positive for CMV (Figure). Subsequent serological evaluation revealed normal complete blood count and comprehensive metabolic panel. Tests for human immunodeficiency virus, syphilis, viral hepatitis, chlamydia and gonorrhea were negative. He was treated with Valganciclovir 900 milligrams twice daily for 21 days. A subsequent test for CMV deoxyribonucleic acid polymerase chain was negative. Hematochezia resolved. Repeat colonoscopy revealed normal mucosa in the cecum.
Discussion: GI CMV infections in immunocompetent patients are rare and typically occur in older patients with medical comorbidities. One study identified 56 immunocompetent patients with GI CMV infections (mean age of 73 years) that had a higher 6-month mortality rate (39.2%) than 117 immunocompromised patients with CMV GI infections (21.9%), highlighting the significant comorbidities in the immunocompetent group. Another study of 13 immunocompetent patients with GI CMV infections (median age 81 years) found 54% had immune-modulating conditions (i.e. diabetes, liver or renal failure). A third study of 89 immunocompetent patients with GI CMV infections (median age 70 years) showed a majority had significant comorbidities. Further such case reports are needed to inform clinicians about risk factors and presentation of GI CMV infections in young healthy immunocompetent patients.



[2194] **Figure 1.** (left): Ulcer with surrounding nodular mucosa (thick black arrow) to the right of the appendiceal orifice in the cecum (right): Immunohistochemical stain for cytomegalovirus (CMV) at 20x magnification. The brown nuclear stains correspond to CMV positive cells (thin black arrow).

S2195

A Masquerade Ball at the Descending Colon

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Introduction: Abdominal tuberculosis (TB) accounts for up to 5% of TB cases worldwide and the proximal colon is the most affected site. It can involve any part of the GI tract, however, TB in the descending colon is rarely reported. Most cases present with non-specific symptoms and without concomitant pulmonary TB making the diagnosis challenging and delayed.
Case Description/Methods: An 80-year-old man was found with new-onset microcytic anemia on routine labs. His PCP ordered a FIT test which came back positive. He reported being asymptomatic and denied GI bleeding. Diagnostic colonoscopy was performed which revealed a tumorous lesion in the descending colon occupying over 50% of the lumen. Preliminary endoscopic impression was concerning for malignancy and multiple biopsies were obtained. Pathology report revealed an acute focal colitis with an aphthous ulcer and few non-necrotizing granulomas. Given incongruity in pathology findings, a sigmoidoscopy was performed, and biopsy findings again revealed granulomatous inflammation as well as 2 small acid-fast positive structures. The patient underwent QuantiFERON testing which was positive. He reported a childhood exposure to mycobacterium tuberculosis but did not recall receiving treatment. Chest CT scan did not reveal any significant pulmonary findings and Abdominal CT scan did not show additional organ involvement. A definite diagnosis of M. tuberculosis could not be ascertained as biopsied samples were not cultured. Thus, another colonoscopy was performed with emphasis on tuberculosis microscopy and culture. Empiric treatment with RIPE and Azithromycin was started to cover tuberculosis and non-tuberculosis mycobacterium. M. tuberculosis was diagnosed by DNA probe and azithromycin was discontinued.
Discussion: Abdominal TB possesses a diagnostic challenge due to its non-specific clinical presentation. When intestinal involvement is present, abdominal pain, weight loss, and changes in bowel habits are the most common manifestations. Endoscopically, it can mimic Crohn's Disease given its ulcerative nature as well as malignancy due to a hyperplastic reaction occasioning an inflammatory mass in the lumen. In the intestines it frequently leads to stricture formation resulting in bowel obstruction. Abdominal TB is generally responsive to standard anti-tuberculous drugs and has shown significant resolution of symptoms in cases of tuberculous strictures. High clinical suspicion is necessary to ensure early diagnosis and treatment leading to favorable outcomes.