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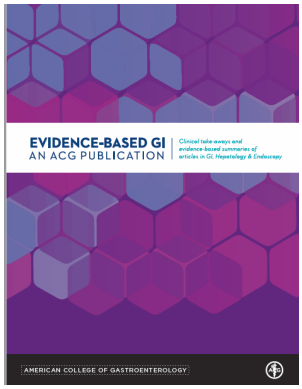

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EVIDENCE-BASED GI
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A New "Pill Prep" for Colonoscopy: An Effective Alternative for Individuals Who Won't Drink GoLytely®

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Philip N. Okafor, MD, MPH
Associate Editor

This article reviews DiPalma JA, Bhandari R, Cleveland M, et al A Safety and Efficacy Comparison of a New Sulfate-Based Tablet Bowel Preparation Versus a PEG and Ascorbate Comparator in Adult Subjects Undergoing Colonoscopy. Am J Gastroenterol 2021; 116: 319-28 PMID: 33165006

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STRUCTURED ABSTRACT

Question: For colonoscopy bowel preparation, does an oral, tasteless, sulfate-based tablet (SUTAB®; Braintree Laboratories, Braintree, MA) cleanse as well as a 2-liter solution containing PEG3350, electrolytes, and ascorbate (MoviPrep®; Salix Pharmaceuticals, Morrisville, NC)?
Design: Randomized, single-blind (investigator) noninferiority trial of SUTAB® vs MoviPrep® with 24-48 hours of follow-up after colonoscopy for safety assessment.
Setting: Twenty-two United States study sites including hospital-based and stand-alone gastroenterology practices.
Patients: There were 515 adult outpatients (mean age: 57.9 years, 56% women, 78% White) requiring a colonoscopy for colorectal cancer screening, colon polyp surveillance, or GI symptoms. In addition to routine exclusions from bowel prep (e.g., suspected ileus or obstruction), patients were excluded if they had severe renal, liver, or cardiac insufficiency.
Intervention: SUTAB® prep requires intake of 12 oral sulfate tablets (OST) taken the evening before colonoscopy with a minimum of 16 ounces/473 ml of water. A second 12-tablet dose (with minimum of 16 ounces/473 ml of water) is taken 5-8 hours before colonoscopy. Additional

hydration with 32 ounces/946 ml of water was required with each dose. Thus, the minimum total liquid intake was approximately 3 liters of water with prep. Participants in the comparator arm received a split-dose of MoviPrep®, which is a 2-liter bowel prep solution containing PEG3350, electrolytes, and ascorbate with an additional 500ml of clear liquid intake with each 1-liter dose of prep.

Outcomes: The primary efficacy endpoint was global colon cleansing using a new US FDA bowel prep scoring scale which also accounts for work of endoscopist cleansing. Specifically, *excellent*: no more than small bits of feces/fluid which can be suctioned easily; achieves clear visualization of the entire mucosa; *good*: feces and fluid requiring washing and suctioning, but still achieves clear visualization of the entire mucosa; *fair*, enough feces even after washing and suctioning to prevent clear visualization of the entire colonic mucosa; *poor*, large amounts of fecal residue and additional bowel prep required. Grades of good or excellent for global cleansing of the colon were considered successful. Secondary efficacy endpoints included: number of excellent preparations, segmental cleaning score, adequacy of cleansing and need for repreparation, adenoma detection rate, duration of colonoscopy, volume of intraprocedural water needed to irrigate the colon, and cecal intubation rate.

Data Analysis: Intention-to-treat analysis.

Funding: Braintree Laboratories, part of Sebela Pharmaceuticals, Inc.

Results: Study results are summarized in **Table 1**.

COMMENTARY

Why Is This Important?

For some patients, the bowel prep is worse than the colonoscopy procedure itself! In a survey of individuals that declined a colonoscopy even after a positive stool-based screening test, some based their decision on the discomfort associated with the bowel preparation.[1] However, even reluctant patients need to be compliant with prep instructions because a high-quality bowel preparation is necessary to optimize the adenoma detection rate and cecal intubation rate. In addition, suboptimal or inadequate bowel prep leads to increased procedure duration, incomplete colonoscopies, missed lesions, and higher costs.[2]

Outcomes		OST	PEG-EA	*P*-value
Overall cleansing rating	Successful cleansing (defined as excellent or good), n (%)	257 (92.4%)	241 (89.3%)	0.217*
Secondary endpoints	Cecal intubation rate, n (%)	271 (98.2%)	261 (97.8%)	0.824
	Adenoma detection rateΨ, n (%)	92 (33.1%)	94 (34.8%)	0.532
	Procedure duration, mean (SD)	15.8 (9.6)	15.9 (8.1)	0.909
	Intraprocedural water in mls, mean (SD)	88.4 (128.1)	93.8 (126.2)	0.632
Tolerance	Abdominal pain	17%	19%	0.655
	Abdominal distension	30%	22%	0.052
	Nausea	49%	26%	**<0.001**
	Vomiting	23%	6%	**<0.001**
Experience consuming bowel preparation	Very easy or easy	65.1%	39.5%	**<0.001**

Table 1. Outcomes
**P*-value for treatment difference, successful=excellent or good
Ψ Observed during screening and disgnostic colonoscopies
OST, oral sulfate tablets (SUTAB®, Braintree Laboratories, Braintree, MA)
PEG-EA, PEG3350, electrolytes, and ascorbate (MoviPrep®, Salix Pharmaceuticals, Morrisville, NC)

Since many patients dislike the taste and volume of current bowel preparations, a tablet-based formulation is very appealing. Although oral sodium phosphate tablets (OsmoPrep®, Salix Pharmaceuticals, Morrisville, NC) are available, this formulation has traditionally been avoided because acute phosphate nephropathy is a rare complication. Oral sodium sulfate tablets do not have this risk. This is the first published randomized controlled trial (RCT) to assess efficacy and safety compared to an FDA-approved bowel preparation, and a second similar RCT comparing OST vs a sodium picosulfate-based oral solution (Prepopik®, no longer marketed) showed similar results.[3]

Key Study Findings

In the SUTAB® arm, 92% of participants had successful cleansing (defined as a score of excellent or good on the global cleansing score) compared with 89% of patients that used MoviPrep® (Table 1), which established non-inferiority. Similar results were achieved in both arms for all secondary efficacy endpoints. Study participants in the SUTAB® group reported more nausea and vomiting than those in the MoviPrep® group,

and this difference was statistically significant (Table 1). However, fewer than 5% had severe symptoms. Interestingly, patient surveys indicated better overall experience with SUTAB® vs MoviPrep® even among participants that had used a previous prep in the past for colonoscopy. In fact, more participants that used SUTAB® (78%) would request it again as compared to those that used MoviPrep®(67%).

Caution

The authors acknowledge that even though adenoma detection rates were comparable between both treatment groups, generalization of this important metric may be limited because the population in this trial was heterogenous as it included patients undergoing colonoscopy for non-screening indications. Another limitation was the choice of cleansing grading scale, which was different from the more common, Boston Bowel Prep Scale. Most importantly, this is a hyperosmolar bowel preparation, so there could be increased risk for adverse events among patients with congestive heart failure, renal insufficiency, or electrolyte disturbances. Therefore, it would be helpful to see more data in patients with cardiac and renal insufficiency.

My Practice

I am yet to prescribe SUTAB®. However, based on these results, I intend to offer it to my patients particularly those hesitant to proceed with colonoscopy because of concern with the large volume and taste of traditional bowel prep formulations. OST may also have a role to play in patients with a history of poor bowel prep because of failure to completely consume large volume bowel prep. Until we have more safety data, I will probably avoid OST in patients with moderate renal insufficiency or congestive heart failure. In addition, as I adopt SUTAB in my clinical practice, out-of-pocket cost for the patient will be a critical factor. For most patients with Medicare Part D or commercial insurance, the maximum cost would be $40 when using a coupon from the SUTAB website, but GoLytely® should not cost more than $15 with a GoodRx coupon or even have a copay less than $5.

For Future Research

Since this study was exclusively performed in an outpatient population, there may be some utility in studying the efficacy of OST in the inpatient setting.

In addition, cost-effectiveness analyses particularly from a payer and societal perspective would be important to explore given the attendant costs of poor bowel preparation. Data from these cost-effectiveness studies can inform third-party payers which will improve insurance coverage for OST among patients that prefer this new pill prep for colonoscopy.

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EVIDENCE-BASED GI
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Inching Closer to a NASH Cure: Daily Semaglutide Achieves Resolution of NASH but *Not* Fibrosis after 72 Weeks

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This article reviews: Newsome PN, et al. A Placebo-Controlled Trial of Subcutaneous Semaglutide. N Engl J Med 2021;384(12):1113-24. https://pubmed.ncbi.nlm.nih.gov/33185364/

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STRUCTURED ABSTRACT

Question: Is semaglutide, a glucagon-like-peptide-1 (GLP-1) receptor agonist currently used for the treatment of type II diabetes mellites (DM) and weight loss,[1] effective treatment in patients with biopsy-proven nonalcoholic steatohepatitis (NASH) and fibrosis?

Design: This was a phase 2, randomized, double-blind, placebo-controlled, parallel-group trial for 72 weeks that included patients with biopsy confirmed NASH and hepatic fibrosis (stage F1, F2, or F3 but not F4/cirrhosis). Patients were randomized in a 3:3:3:1:1:1 ratio to receive varying doses of semaglutide or placebo.

Setting: This trial was conducted across 16 countries at 143 sites.

Patients: There were 320 patients 18 to 75 years old (mean 55 years) with biopsy confirmed NASH and fibrosis (28% with F1, 22% with F2, and 49% with F3), with or without DM (glycosylated hemoglobin, HgA1c, $\leq$10%), and a body mass index (BMI) of >25. The majority of patients were women (61%), White (78%), and had DM (62%) with a mean BMI of 36. Patients with other chronic liver disease, excessive alcohol consumption, and on other modifying treatments (such as Vitamin E or pioglitazone) were excluded from the trial.

Interventions/Exposure: Patients received daily subcutaneous semaglutide at a dose of 0.1, 0.2, or 0.4 mg or placebo. All subjects received routine nutrition and physical activity counseling.
Outcome: The primary end point was NASH resolution without fibrosis worsening; secondary endpoint was fibrosis improvement (of at least 1 stage) without NASH worsening.
Data Analysis: Intention-to-treat and per-protocol analysis reported. Only patients with F2 or F3 fibrosis at baseline were analyzed for the primary endpoint of NASH resolution (to more closely match the intended target population as determined by the US Food and Drug Administration and European Medicines Agency).
Funding: Novo Nordisk, who manufactures semaglutide, was involved in trial design, site monitoring, data collection, and analysis.
Results: Significantly more patients in the semaglutide groups then in the placebo groups achieved NASH resolution without worsening of F2 or F3 fibrosis with the greatest results seen in the semaglutide 0.4mg group (59% vs 17% in placebo; **Figure 1**). The study did not achieve their secondary endpoint; no semaglutide groups had significantly greater improvement in fibrosis without worsening NASH compared to placebo (**Figure 2**). Patients in the semaglutide groups also had dose dependent reductions in HgA1c, liver tests, hepatic stiffness values (based on transient elastography), and body weight (13% in the semaglutide 0.4mg group vs 1% in placebo) at 72 weeks.

COMMENTARY

Why Is This Important?

Approximately 30% of the US population has nonalcoholic fatty liver disease (NAFLD) with 83 million people affected and of those, 3.3 million at risk for cirrhosis and its complications.[2] While weight loss can reverse NAFLD and NASH, it is difficult to sustain. Currently there are no FDA approved medications for the treatment of NASH although there are several currently in the pipeline.[3]

Key Study Findings

More patients on semaglutide, especially higher dose 0.4mg daily, had NASH resolution compared to placebo at 72 weeks. However, semaglutide did not improve hepatic fibrosis in patients with NASH.

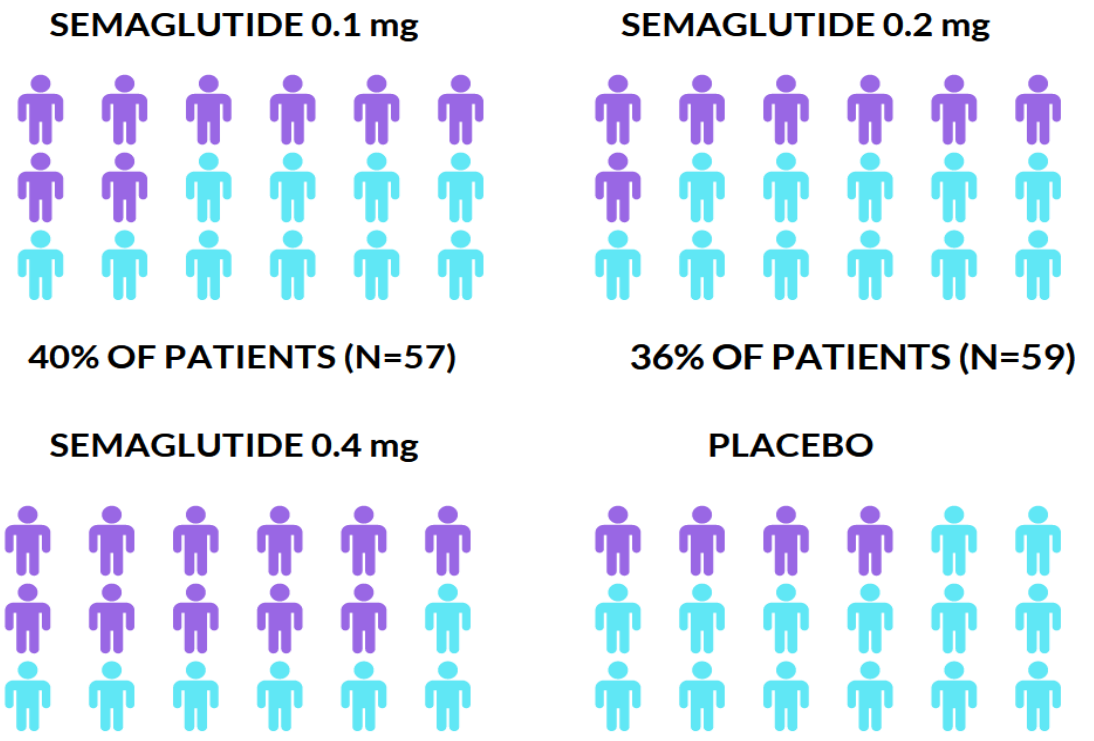

Figure 1. Resolution of NASH with No Worsening of Liver Fibrosis

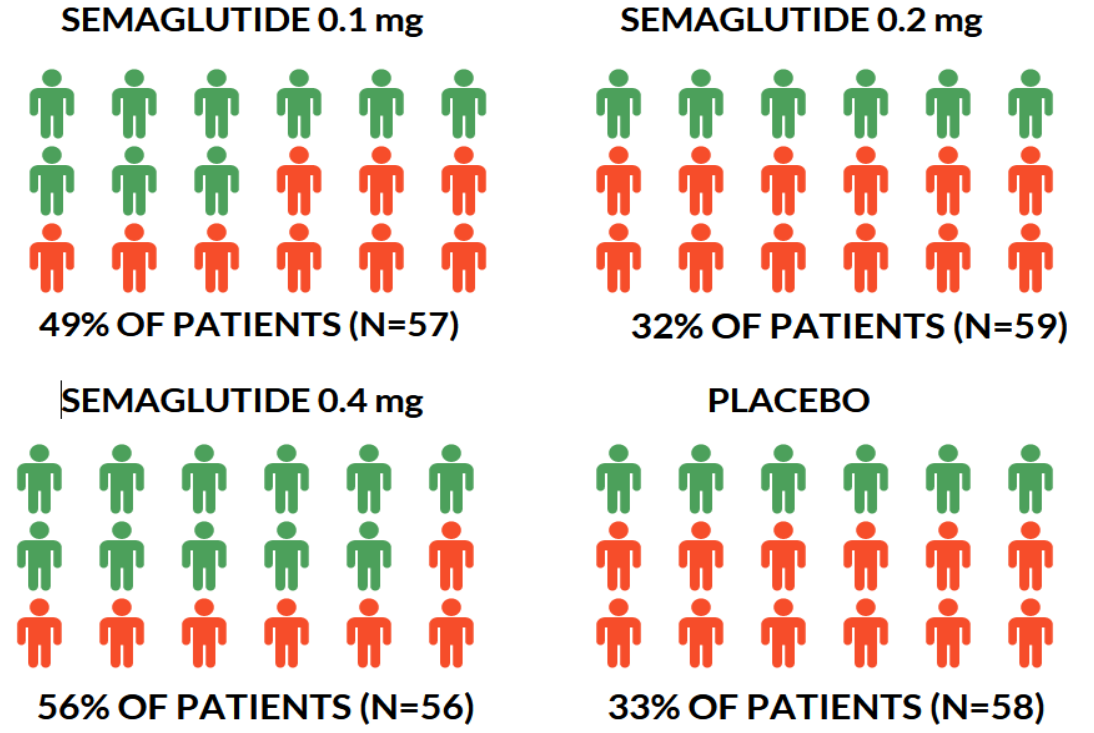

Figure 2. Resolution of NASH with No Worsening of NASH

Caution

Semaglutide was associated with more GI complications, including nausea (42% vs 11%), constipation (22% vs 12%), and vomiting (15% vs 2%). Cholelithiasis was also seen in about 6% of the semaglutide group (presumably related to weight loss). The placebo rate of fibrosis regression was also very high at 33% for unclear reasons but not uncommonly seen in NASH trials.[4] Additionally, semaglutide is often weekly (either in 1mg or 2.4 mg injections) and not daily as designated in this trial.

My Practice

In my hepatology practice, I use a multidisciplinary approach in the management of NAFLD. Other causes of fatty liver (including alcohol, hepatitis C, medications, and Wilson's disease if age appropriate) are ruled out and metabolic risk is stratified with HgA1c and lipid panel, and patients receive transient elastography to stage their fibrosis (if any). Our dieticians also perform an extensive dietary and physical activity inventory. We incorporate the Mediterranean diet (modified to include not more then 30 grams of carbohydrates/meal), 3 cups of drip coffee/day, and 4-5 tablespoons of olive oil / day in addition to physical activity (10,000 steps / day up to 150 minutes of moderate exercise / week). Semaglutide is used as an adjunct to diet and lifestyle interventions for purposes of either weight loss (marketed as Wegovy®; in patients with BMI $\geq$30 or $\geq$27 with one metabolic co-morbidity) or for diabetes control (Ozempic®, often with the partnership of our endocrinologist) but not specifically used for NASH given the limited data and insurance restrictions. In addition, I always counsel my patients on the association with medullary thyroid cancer and multiple endocrine neoplasm syndrome 2 (MEN2) with the use of GLP-1 agonists; anyone with a personal or family history of such cancers should not use semaglutide. Vitamin E 800 IU/day in patients with biopsy proven NASH (with or without diabetes or cirrhosis) can also be used.[5] Other weight loss medications or referral to bariatric surgery are also commonly used in my practice for NAFLD management.

For future research

Weekly semaglutide 2.4mg (the dose for obesity management)[1] is currently being investigated for NASH treatment (NCT04822181).

Any medication used for the treatment of NASH will need to achieve both NASH and fibrosis resolution, address the co-morbidities associated with NAFLD including metabolic syndrome and cardiovascular disease, and have a tolerable metabolic side effect.[3] Semaglutide is close to achieving many of these endpoints.

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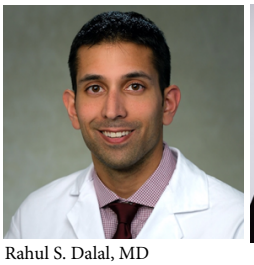
IBD

Infliximab Therapy Is Associated with Reduced Antibody Responses Against SARS-CoV-2



Rahul S. Dalal, MD
Guest Contributor

Jessica R. Allegretti, MD, MPH
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This article reviews Kennedy NA, Goodhand JR, Bewshea C, et al. Anti-SARS-CoV-2 antibody response are attenuated in patients with IBD treated with infliximab. Gut 2021; 70: 865-75. PMID: 33753421
https://pubmed.ncbi.nlm.nih.gov/33753421/

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STRUCTURED ABSTRACT

Question: Are anti-SARS-CoV antibody responses attenuated among IBD patients treated with infliximab, an anti-tumor necrosis factor (anti-TNF) agent which may suppress immune responses compared to IBD patients treated with vedolizumab, a gut-specific monoclonal antibody that is not associated with increased risk of systemic infection or attenuated serological response to vaccination?

Design: Prospective observational cohort study.

Setting: Infusion units from 92 National Health Service hospitals across the United Kingdom.

Patients: A total of 7,226 patients with inflammatory bowel disease (IBD) were enrolled between September 2020 and December 2020. Median age was 39 years, 88.4% of patients were White, 46.4% were female, and 56.9% had Crohn's disease. Patients were required to be treated with infliximab (67.6%) or vedolizumab (32.4%) for 6 or more weeks and at least 1 dose in the past 16 weeks. Those who participated in prior SARS-CoV-2 vaccine trials were excluded.

Exposure: The main exposures were infliximab vs vedolizumab therapy among patients with IBD.

Outcome: Proportion of IBD patients with positive anti-SARS-CoV antibody test.

Data Analysis: Rates of antibody seroconversion among patients overall and among those with confirmed COVID-19 infection based on a positive PCR test to SARS-CoV-2 were compared between biologic group using Fisher's exact and Mann-Whitney U tests. Multivariable logistic regression was used to identify factors independently associated with seropositivity for SARS-CoV-2.

Funding: The study was funded by F. Hoffmann-La Roche, Hull University Teaching Hospital NHS Trust, Biogen GmbH, Celltrion Healthcare, Galapagos NV, Royal Devon, and the Exeter NHS Foundation Trust.

Results: Seroprevalence for anti-SARS-CoV-2 antibody was lower among infliximab-treated patients compared to vedolizumab-treated patients. Among patients with confirmed COVID-19 infection based on a positive PCR test, there were lower rates of antibody seroconversion among infliximab-treated patients compared to vedolizumab-treated patients **(Table 1)**. On multivariable analysis, infliximab and immunomodulator use were independently associated with lower seropositivity.

Exposures overall	**SARS-CoV-2 Seropositivity**			***P*-value**
Biologic				<0.01
Infliximab	3.4%			
Vedolizumab	6.0%			
Biologic +/- immunomodulator				<0.01
Infliximab monotherapy	4.1%			
Infliximab + immunomodulator	3.0%			
Vedolizumab monotherapy	6.3%			
Vedolizumab + immunomodulator	4.5%			
Exposures in patients with confirmed SARS-CoV-2 infection	**SARS-CoV-2 Seropositivity**	***P*-value**	**Antibody reactivity (COI)**	***P*-value**
Biologic		<0.01		<0.01
Infliximab	48%		14.5	
Vedolizumab	83%		47.2	

Table 1. Summary of findings.
COI, cut off index. The COI is a quantitative measure of magnitude of antibody response.

COMMENTARY

Why Is This Important?

Unlike vedolizumab, anti-TNF agents such as infliximab are known to blunt antibody-mediated immune responses. Patients with IBD appear to be at similar risk for infection and illness severity for COVID-19 regardless of type of biologic therapy.[1,2] However, relative serologic responses and protection after exposure to SARS-CoV-2 are unknown.

The results of the study suggest that patients treated with infliximab are less likely to mount an anti-SARS-CoV-2 antibody response and also have a lower magnitude of antibody reactivity when compared vedolizumab-treated patients with IBD. This raises concern that patients receiving anti-TNF agents may have less protection against COVID-19 after exposure or vaccination. A recent study supports this suspicion, as patients treated with infliximab had lower anti-SARS-CoV-2 antibody concentrations after a single vaccine dose compared to patients treated with vedolizumab.[3] After 2 vaccine doses, seroconversion was observed for the majority of patients. However, another prospective study observed a lower magnitude of antibody response after 2 mRNA vaccine doses among anti-TNF-treated patients.[4] In a recent analysis of 528 patients with IBD, 99% achieved detectable antibodies 2 weeks after the second dose of an mRNA vaccine regardless of medication regimen.[5] However, patients receiving combination therapy with an anti-TNF and immunomodulator had the lowest level of detectable antibodies. In combination, these findings justify a proactive and perhaps more intensive approach towards vaccination for the anti-TNF-treated population. Gastroenterologists should consider these data when counseling immunosuppressed patients whose vaccination hesitancy stems from the assumption that prior COVID-19 infection confers immunity.

Key Study Findings

The authors found that the seroprevalence of anti-SARS-CoV-2 antibodies was lower among IBD patients treated with infliximab compared to vedolizumab. Among patients with COVID-19 infection confirmed by PCR testing, there were lower rates of antibody responses and a lower magnitude of antibody reactivity among those treated with infliximab compared to vedolizumab. On multivariable analysis, infliximab and immunomodulator use were independently associated with lower anti-SARS-CoV-2 antibody seropositivity.

Caution

While the study identified reduced antibody responses among infliximab-treated patients, other forms of immune responses, such as T-cell responses, were not investigated. Additionally, other anti-TNF agents such as adalimumab, golimumab, and certolizumab were not included in this study.

Therefore, it is unknown if the findings will translate to a higher risk of COVID-19 infection for patients treated with anti-TNF agents in general.

My Practice

I encourage all of my patients to receive one of the FDA-approved COVID-19 vaccines, which are safe and effective. I advise my IBD patients on immunomodulators, corticosteroids, and biologics to receive a booster dose of the vaccine, including those on less systemically immunosuppressive agents such as vedolizumab. Acknowledging the possibility of breakthrough infections, I continue to emphasize mask-wearing, frequent hand washing, avoidance of large indoor gatherings, and staying home when infectious symptoms arise.

For Future Research

A growing body of evidence suggests that anti-SARS-CoV-2 antibody responses are suppressed with anti-TNF agents. What remains unclear is if infectious risks are also increased, and if multiple booster doses may be beneficial for these individuals. Future research should attempt to compare the long-term rate of SARS-CoV-2 breakthrough infections between biologic classes and determine the clinical applications of post-vaccination serological testing.

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ENDOSCOPY

Computer-aided Detection Systems Increase Detection of Non-advanced Adenomas, but Is It Ready for Prime-time?

Shria Kumar, MD, MSCE *Associate Editor*

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This article reviews Repici A, Badalamenti M, Maselli R, et al. Efficacy of Real-Time Computer-Aided Detection of Colorectal Neoplasia in a Randomized Trial. Gastroenterology 2020;159(2):512-520.e7. PMID: 32371116 https://pubmed.ncbi.nlm.nih.gov/32371116/

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STRUCTURED ABSTRACT

Question: Do computer-aided detection systems help detect more adenomas during colonoscopy?

Design: Randomized controlled trial with patients randomized to undergo colonoscopy with or without a computer-aided detection tool, GI-Genius™ (Medtronic, Minneapolis, MN) to identify adenomas.

Setting: Three Italian endoscopy centers participating in an organized population-based CRC screening program.

Patients: Outpatients undergoing colonoscopy for screening and surveillance, positive fecal immunohistochemical test, or symptoms prompting colonoscopy.

Interventions: Six experienced endoscopists (>2,000 colonoscopies completed) performed the colonoscopies, and were not blinded to study assignment. GI-Genius™ is a deep learning system that draws endoscopist attention to a potential polyp, by overlaying a "detection box" onto the endoscopy monitor (**Figure 1**). The endoscopist can then closely examine and resect the lesion as appropriate.

Outcomes: Adenoma detection rate (ADR) was the primary outcome.

Data Analysis: Comparison of ADR between the GI-Genius vs control group, with reported relative risks in an intention-to-treat fashion.

Funding: No funding; Medtronic loaned equipment.

Results: A total of 685 patients underwent randomization, 341 in the GI-Genius™ arm and 344 in the control arm. After adjusting for age, gender, and indication, ADR was significantly higher in the GI-Genius™ group, RR, 1.30; 95% CI, 1.14–1.45 (**Table 1**). This reflects increases in detection of non-advanced adenomas, including lesions < 5mm and 6-9 mm lesions. The GI-Genius was adept in detecting lesions that were polypoid and non-polypoid, both in the proximal and distal colon. The GI-Genius™ did not detect significantly more advanced adenomas, adenocarcinomas, or sessile serrated lesions, as compared to controls. The authors also evaluated those "polyps" that were resected without any histologic pathology. There was no statistically significant difference in this non-neoplastic resection rate between the 2 groups.

Lesion	GI-Genius (n=341)	Control (n=344)	Adjusted RR (95%CI)	*P*-value
Adenomas and cancers	187 (54.8)	139 (40.4)	1.30 (1.14–1.45)	<0.001
Non-advanced adenomas	142 (41.6)	103 (29.9)	1.35 (1.13-1.57)	<0.001
Lesions ≤ 5mm	115 (33.7)	91 (26.5)	1.26 (1.01–1.52)	0.038
Lesions 6-9 mm	36 (10.6)	20 (5.8)	1.78 (1.09–2.86)	0.025

Table 1. Summary of findings.
CI, confidence interval; RR, risk ratio.

COMMENTARY

Why Is This Important?

Higher ADRs are associated with lower rates of post-colonoscopy colorectal cancer.[1,2] Interventions to improve ADR are of intense interest. GI-Genius™ is now FDA-approved and can be integrated into existing endoscopy systems. Since it draws endoscopist attention to a potential polyp by overlaying a detection box onto the endoscopy monitor (**Figure 1**), it may

be easily used to improve ADR.[3] Multiple artificial intelligence (AI) systems have been described, and international consensus groups have looked to best guide implementation.[4,5] Important questions include benchmarks for satisfactory AI and how to standardize thresholds to ensure improved patient outcomes.

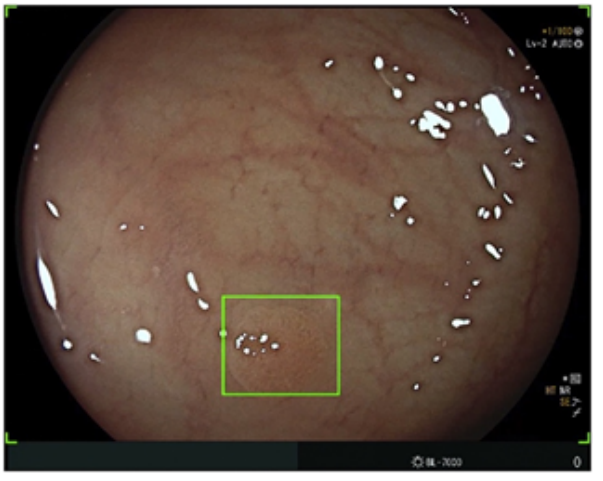

Figure 1.
The GI-Genius™ output appears on the same screen of the endoscopy system and highlights potential adenomas.

Key Study Findings

This is a well-designed randomized controlled trial to evaluate the real-world impact of AI in colonoscopy. GI-Genius significantly improved ADR for non-advanced adenomas (41.6% vs 29.9%, $P< 0.001$) (**Figure 2**). However, there was no significant improvement in ADR for advanced adenomas or sessile serrated lesions, although the sample size was too small to adequately assess those endpoints. Importantly, there was no increased detection (or resection) of non-adenomatous polyps with the GI-Genius™.

Caution

The study excluded poorly prepped colons, which underlines the limits of AI in colonoscopy. If the mucosa is not visualized, then AI cannot help. Preparation must be adequate, and the endoscopist needs to flatten folds and assure adequate visualization for the AI tool to work. The endoscopists in this trial are experienced endoscopists, potentially limiting generalizability to wider practice. However, another recent study by Repici, et al demonstrated similar improvements in ADR among less experienced endoscopists (< 2000 colonoscopies).[6] In the current study, endoscopists utilized GI-Genius™ on

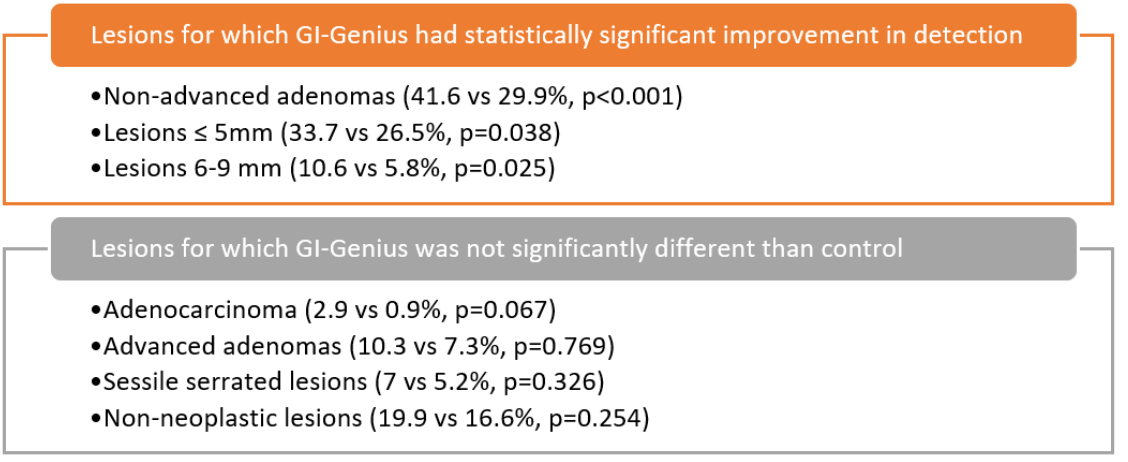

Figure 2. Comparison of GI-Genius™ vs control, by lesion characteristic.

insertion and withdrawal, which is slightly different than standard practice of inspection on withdrawal alone. Lastly, endoscopists were not blinded, and there could be psychological bias due to this.

My Practice

We have piloted the GI-Genius™ but are not currently using the tool in our practice. Since our group have good ADRs and since the technology is expensive, our centers have not yet opted to incorporate it. This decision may change given the rapid changes in the AI field. If an AI system clearly improves detection of lesions that are harder to detect (e.g., sessile serrated lesions), then we would be even more enthusiastic about the system. There is promise to this end: a recent study by Glissen Brown, et al. evaluating a different AI system demonstrated a decreased miss rate of both adenomas and sessile serrated lesions.[7] This also highlights that different AI systems may come to market and comparison between them is important.

For Future Research

The benefit of AI should be evaluated in poor performers with ADR < 25%, since this group clearly needs interventions for improvement. Standard benchmarks for satisfactory AI in colonoscopy are needed, particularly given the different operating systems, and the cost-effectiveness of implementing AI should be evaluated. The precision of AI is improving rapidly and cost-effectiveness may change when different operating systems are available.

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