

Persistent Watery Diarrhea Is it all Microscopic Colitis?

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Disclosures

None pertinent to this talk

Overview

- Microscopic colitis
 - Clinical features
 - Epidemiology
 - Clinically relevant pathophysiology
- Approach to differential diagnosis

Background

Chronic watery diarrhea is important

- 1-5% of US population^{1,2}
- Estimated cost in 2001 >\$650 million³
- Significant impact on QOL, work, social activities

- 1) Schiller Gastro 2004
- 2) Headstrom and Surawicz CGH 2005
- 3) AGA 2001

Microscopic Colitis

Clinical Features

- Constant or intermittent watery diarrhea
- 50% with abdominal pain, mild weight loss
- Arthralgias, autoimmunity common, **sprue**
- Association with NSAIDs and other meds
- 50% have fecal WBCs
- Mucosa usually grossly normal

Epidemiology

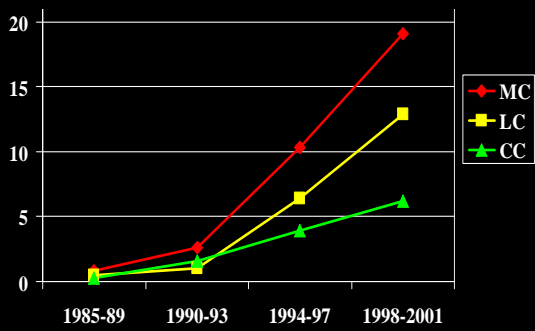
- European and Canadian studies:
Incidence ~5/100,000 each
- Typically 6th-7th decade
– e.g., in Calgary, age >65 RR = 5.6
- Female predominance (CC > LC)
- 7-15% of chronic watery diarrhea

Olmsted County Incidence Data

1985-2001 CC 3.1/100,000
LC 5.5/100,000

1997-2001 CC 6.2/100,000
LC 12.9/100,000

Incidence of Microscopic Colitis, Olmsted County 1985-2001



Pathophysiology

- NSAIDs and other drugs
- Abnormal fluid/salt secretion/absorption
- Bile acid malabsorption
- Abnormal collagen synthesis/degradation
- Infection
- Autoimmunity
- Reaction to luminal antigen

Drug-induced Microscopic Colitis

- High level evidence
 - acarbose, aspirin, NSAIDs, PPI, SSRI, ticlopidine
- Intermediate level
 - Carbamazepine, flutamide, lisinopril, levodopa/benserazide, simvastatin

Beaugerie and Pardi APT 2005

Drug-induced Microscopic Colitis

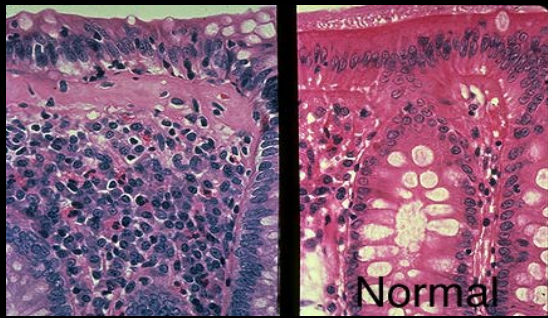
- Collagenous colitis
 - Associated with NSAID, SSRI
- Lymphocytic colitis
 - B-blockers, SSRI, statins, bisphosphonates
 - not NSAID
- Watery diarrhea
 - SSRI, statins

Fernandez-Banares Am J Gastro 2007

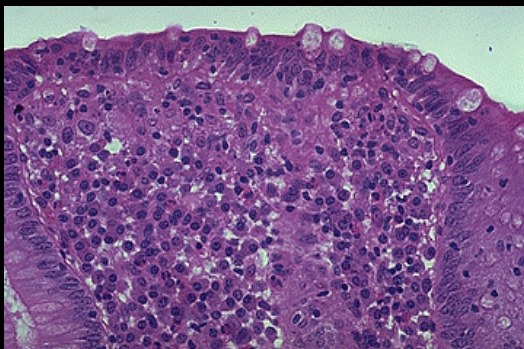
Histology

- Flexible sig with bx above the rectum sufficient for Dx in most
- ↑ IELs +/- surface epithelial damage
- Mixed inflammation in lamina propria
- In CC, ↑ subepithelial collagen band
- No crypt architectural distortion

Collagenous Colitis



Lymphocytic Colitis



Differential Diagnosis

Irritable Bowel Syndrome

Overlap with IBS

- 50-70% in Olmsted County cohort¹
- 28-65% in post hoc analysis of RCTs²

1) Limsui IBD 2007
2) Madish World J Gastro 2005

Celiac Sprue

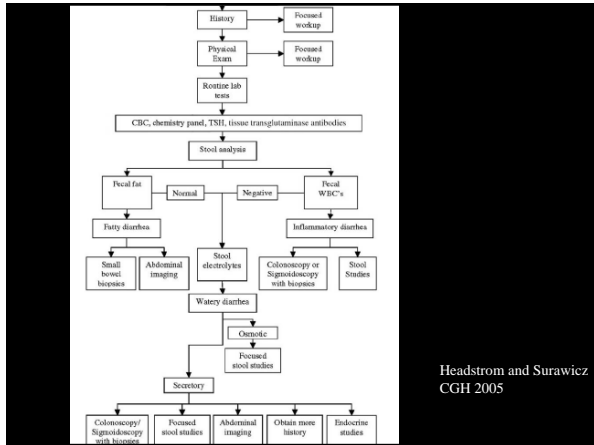
- 1/3 of patients with sprue have MC-like changes on colon biopsies^{1,2}
- Small bowel changes in 2-40% of MC
- In largest studies, closer to 2-9%³⁻⁵
- Serologies may be less sensitive in MC⁶
- Consider sprue if steatorrhea, IDA, non-response to MC medications

1) Wolber Hun Path 1990 2) Breen Scand J Gastro 1987 3) Bohr Gut 1996
4) Zins AJG 1995 5) Oleson Gut 2004 6) Fine AJG 2000

Approach to Chronic Diarrhea

- “Categorize and Test”
 - Inflammatory (Fecal WBC)
 - Osmotic (Stool osmolar gap >50)
 - Secretory (Stool osmolar gap <50)
 - Steatorrhea (fecal fat >14 gm/d)
- Don’t miss opportunity for CRC screening

1) Schiller Gastro 2004



Headstrom and Surawicz
CGH 2005

Inflammatory Diarrhea

- Crohn’s disease
- Infections
- Ischemia
- Neoplasms
- Microscopic colitis
- Miscellaneous
 - Radiation, eosinophilic

Osmotic Diarrhea

Common form of chronic diarrhea

- Carbohydrate malabsorption
 - Lactose, fructose, sorbitol, etc
- Exogenous ions
 - Mg, SO₄, PO₄, etc

Secretory Diarrhea

- Infections
- Endocrinopathies
- Microscopic colitis
- Medications
- Bile acid malabsorption
- Rarely, hormone secreting tumors

Steatorrhea

Maldigestion

- Pancreatic insufficiency
- Bacterial overgrowth

Malabsorption

- Small bowel mucosal disease
 - Celiac sprue, Crohn's, etc
- Lymphatic obstruction

Causes of Chronic Diarrhea

- 809 non-HIV patients at referral center
 - Steatorrhea 41%
 - Microscopic colitis 10%
 - Osmotic diarrhea 9%
 - Crohn's disease 3%

Fine GI Endoscopy 2000

Causes of Chronic Diarrhea

168 non-HIV patients at referral center

- IBS 56%
- Microscopic colitis 8%
- Infection 8%
- Medication 8%
- Misc inflammatory 6%

Shah Am J Gastro 2001

Summary

- Microscopic colitis is relatively common cause of diarrhea, particularly in elderly
- Consider celiac disease if suggestion of steatorrhea or significant weight loss
- Consider drug-induced MC
- Several other causes of chronic diarrhea occur in this age group
