CASE REPORT

Microscopic Colitis Presenting as Difficult Diarrhea in a Patient of Rheumatoid Arthritis

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ABSTRACT

Microscopic colitis is an uncommon intestinal disorder that presents with chronic diarrhea. It is treatable, but its diagnosis may often prove difficult specifically in developing countries as it requires a GI endoscopy unit and since its incidence is on rise now it needs a high index of suspicion followed by colonic biopsy for diagnosis. It is a condition diagnosed when a patient with chronic watery nonbloody diarrhea has an endoscopically or radiographically normal colon, but colonic mucosal biopsies show unique inflammatory changes; because the mucosa is not otherwise disrupted or ulcerated, diarrhea does not contain blood or pus. We present the case of a 53-year-old woman with pathogen-negative chronic diarrhea who is a k/c/o rheumatoid arthritis (RA) since past 12 years and hypothyroidism since past 5 years. She responded well to treatment of low-dose steroids after colonoscopy and colonic biopsy successfully hinted her illness.

Conclusion: Patients with pathogen-negative chronic diarrhea having h/o multiple drugs intake or autoimmune diseases not responding to usual treatment should be subjected to a colonoscopy followed by biopsy to diagnose microscopic colitis.

Keywords: Antinuclear antibody, Collagenous colitis, Irritable bowel syndrome, Lymphocytic colitis, Metacarpophalangeal (joint)/proximal interphalangeal (joint), Microscopic colitis, Small intestine.

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INTRODUCTION

In the developing world where there is scarcity of endoscopic centers and affordability issues on part of patients for such procedures, patients presenting with chronic diarrhea for which no other infective, metabolic, or mechanical cause is found are usually thought to have diarrheal type of irritable bowel syndrome (IBS) and managed empirically as such.

Since in our case patient also had h/o rheumatoid arthritis (RA), a possibility of inflammatory bowel disease was thought but her diarrhea was not associated with blood or pus, which made it a less likely possibility.

Lymphocytic and collagenous colitis make a group of uncommon large bowel inflammatory condition called microscopic colitis in which patients have an endoscopically and radiographically normal colon; since there is no disruption or ulceration of the mucosa, diarrhea does not contain blood or pus.¹⁻³

Around 2–4 out of 10 chronic diarrhea patients have microscopic colitis and strong suspicion should be made in patients who have history of autoimmune diseases or intake of drugs like NSAIDs, SSRIs, lansoprazole, ranitidine, statins, etc. Most people are successfully treated by low-dose steroids and the condition does not increase risk of colonic carcinoma.

We present a case of microscopic colitis in a 53-year-old woman with h/o RA and hypothyroidism.

CASE DESCRIPTION

A 53-year-old woman presented to our facility with c/o profuse watery nonbloody, nonmucoid diarrhea 10–12 episodes/day since last 28 days associated with vomiting on/off, mild to moderate cramping, decreased appetite, weakness and dizziness, and oral ulcers (Fig. 1).

There was no history of any recent weight loss or laxatives, fever, passage of undigested food particles, steatorrhea, etc. (Flowchart 1).

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Figs 1A and B: (A) Lymphocytic colitis showing marked chronic inflammatory cell infiltrate of surface epithelium with preserved crypt architecture and normal subepithelial collagen layer; (B) Collagenous colitis showing similar cell infiltration with thickened subepithelial collagen layer
Source: emedicine.medscape.com

Flowcharts 1A and B: (A) Initial management based on accompanying symptoms or features; (B) Evaluation based on findings from a limited age appropriate screen for organic disease. Alb, albumin; Hb, hemoglobin; IBS, irritable bowel syndrome; BM, bowel movement; MCV, mean corpuscular volume; Osm, osmolality; Pr, per rectum. *Source:* Harrison 19th edition Fig 55-3

She is a k/c/o RA since past 12 years and was on regular treatment with methotrexate, HCQ-S, and 16 mg methylprednisolone but stopped 2 years back when she started ayurvedic medicines for RA (Flowchart 2).

She is also a k/c/o hypothyroidism and HTN since 5 years and took 100 mcg levothyroxine and atenolol/amlodipine 50–5 mg combination for that regularly.

On examination, patient was dehydrated, pale, and edematous with bilateral pitting edema. She also had oral cavity ulcers and reduced mouth opening.

Changes of long-standing RA could be seen like ulnar deviation of both hands and swelling of the right wrist joint, metacarpophalangeal (joint) (MCP), and proximal interphalangeal (joint) (PIP) joints of all four fingers bilaterally.

The lab investigation revealed no ova or cyst, and stool culture sensitivity yielded no pathogen. Her CBC, ESR, urine R/E, thyroid profile, and RFT were within the normal range. The HIV screening was nonreactive but she had hypokalemia (2.45 K⁺), hyponatremia (134 Na⁺), and hypoalbuminemia (albumin: 1.8).

Her RA factor was 931 and anti-nuclear antibody (ANA) negative.

Anti-Ttg was done to rule out celiac disease and was negative.

She was given empirical antibiotics but no response to metronidazole, ofloxacin, probiotics, and rifaximin was seen; only

partial response to loperamide was present and her diarrhea continued with same frequency and consistency.

All her other medications of RA, hypothyroidism, and HTN were withheld but no response was seen.

She was then planned for colonoscopy; after bowel preparation, she underwent fiber-optic colonoscopy. The patient poorly tolerated the procedure and hence biopsies could only be taken from the sigmoid colon and the transverse colon could not be reached. There was no mass lesion or inflammation seen.

The histopath report of colonic biopsy showed fragments of the colonic mucosa showing normal-appearing glands, lamina propria shows mild infiltration of mononuclear cells and lymphocytes, definitive evidence of ulcerative colitis not seen, and possibility of microscopic colitis to be confirmed further on transverse colon biopsies was reported.

The patient was then subsequently started low-dose steroid prednisolone 10 mg bd, which resulted in a dramatic response in reduction of stool frequency and consistency after 2 days; she was then reintroduced to her usual hypothyroidism medication as well as methotrexate, folic acid, and hydroxychloroquine were started for RA and protein supplement for hypoalbuminemia; the patient got complete resolution of diarrhea in 7 days and was discharged and maintained on 10 mg prednisolone od for 8 weeks.

Flowchart 2: Investigational approach to chronic diarrhea Source: Slideshare.net/stanleymedicalcollege

DISCUSSION

Chronic diarrhea is defined as change in bowel habit for greater than 1 month, defecation frequency greater than 3 per day, and stool consistency decreased and fluidity increased.

Microscopic colitis is a rare condition diagnosed when a patient with chronic watery nonbloody diarrhea has an endoscopically or radiographically normal colon, but colonic mucosal biopsies show unique inflammatory changes. Because the mucosa is not otherwise disrupted or ulcerated, diarrhea does not contain blood or pus.^{4,5}

Lymphocytic colitis and collagenous colitis need to be differentiated from infectious colitis and inflammatory bowel disease.

- Lymphocytic colitis (intraepithelial lymphocytes >20 per 100 epithelial cells)
- Collagenous colitis (subepithelial collagen layer >10 micrometer)

Etiology

Microscopic colitis is nine times more common in females and affects age group >50 years; it has a strong association with h/o multiple drug intake, particularly NSAIDs, SSRIs, lansoprazole, ranitidine, sertraline, statins, acarbose, etc., as well as association with diseases like autoimmune diseases: RA, type II diabetes mellitus, hypothyroidism, celiac disease, etc. It also has a genetic link with HLA DR3, DQ2.

Some infectious agents may trigger microscopic colitis like preceding *Campylobacter*, *Yersinia*, *C. difficile* infections. Bile acid malabsorption present in 20–40% irritating the lining of the colon may also predispose to microscopic colitis.

About 2–4 out of 10 chronic diarrhea patients will be microscopic colitis (MC).

Pathophysiology

Collagenous colitis (CC): The diarrhea in CC is more likely due to the inflammatory process than to the subepithelial collagen layer, although this layer may serve as a cofactor in role of a diffusion barrier.

Lymphocytic colitis (LC): Increased levels of immunoreactive prostaglandins, E2 and NO, in the colonic epithelium contribute to secretory diarrhea in patients.

Complications and Prognosis

Most people are successfully treated and the condition does not increase the risk of colon cancer. Mortality and morbidity is limited to consequences of diarrhea and malabsorption, including metabolic and electrolyte abnormalities such as hypokalemia, dehydration, hypoglycemia, weight loss, fatigue, vitamin deficiencies, etc.

Treatment Approach

Rule out celiac disease (most common accompaniment 44% association).

Steroids are the mainstay of treatment; low-dose steroids like prednisolone 10–20 mg/day for 6–8 weeks produced clinical remission in 88% of patients.

Histologic remission is also noted but relapse after stopping prednisolone is seen in 61% and retreatment with 3–6 mg/day is successful, azathioprine/methotrexate for refractory disease.

Mesalamine 2.4 g/day with cholestyramine 4 g/day for 3 months, bismuth subsalicylate: 3 × 262 mg tids for 8 weeks concern for neurotoxicity.

Add an antidiarrheal—loperamide 2 mg × 8 per day.

CONCLUSION

Microscopic colitis is a biopsy diagnosis with an endoscopically normal colon because of which it is often not diagnosed due to lack of GI endoscopy centers as well as affordability issues in population but since its incidence is on rise and every 2–4 out of 10 chronic diarrhea patients may have microscopic colitis, therefore a strong suspicion should be made especially in women with autoimmune disease history or history of multiple drug intake over a long period of time not resolving on usual treatments.

This will help clinicians recognize a potentially treatable condition and allow institution of adequate treatment measures timely.

Most people are successfully treated and the condition does not increase the risk of colon cancer. Mortality and morbidity is limited to consequences of diarrhea and malabsorption, including metabolic and electrolyte abnormalities such as hypokalemia, dehydration, hypoglycemia, weight loss, fatigue, vitamin

deficiencies, etc., and overall the condition in itself carries a good prognosis.

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