CLINICAL VIGNETTE

Rectal Bleeding after Ileostomy

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Case Presentation

This 68-year-old female had synchronous colon cancer with stage IIIB (pT4N1cM0) well-differentiated adenocarcinoma of the transverse colon and stage IIB (pT4N0M0) well differentiated adenocarcinoma sigmoid colon and had surgery with a diverting ileostomy with Hartmann's pouch. Patient was started on chemotherapy 1 month after surgery with the plan to have 6 cycles over 6 months prior to reversing the ileostomy. She was started on Folinic Acid, Fluorouracil, and Oxaliplatin (FOLFOX). Her chemotherapy was complicated by nausea and dehydration with increase in watery output from the ostomy. After her third of 6 planned chemotherapy sessions, she reported rectal bleeding. She denied taking any blood thinners, aspirin or NSAIDS. She reported no recent antibiotics or travel history outside the area. She denied any active hemorrhoids. She had no abdominal pain. Physical exam was largely unremarkable. Labs: WBC 3.1, Hgb 11.7, PLT 104, CRP < 0.3, CMP normal, ESR 9.

Flexible sigmoidoscopy showed diffuse colitis with inflammation, erythema and friability. Biopsies showed features of healing erosions with associated mild mixed inflammation and reactive epithelial changes. Stains were negative for CMV and HSV. The biopsy results and endoscopic appearance were most consistent with a diagnosis of diversion colitis.

Patient was started on butyrate enemas (short-chain fatty acid enemas). She was started initially twice a day and reported that within a week of starting the enemas the rectal bleeding stopped. She was able to taper the daily enemas to every 3 days then to once a week. She resumed her chemotherapy and was able to complete 5 of the 6 planned cycles. She had reversal of her ostomy 6 months after her original surgery and continues to do well with no further bleeding.

Discussion

Diversion colitis is an inflammatory disorder that occurs in segments of the colon and rectum that are diverted from the fecal stream by surgery. This includes surgeries such as diverting ileostomy or colonic resection with an end colostomy and Hartmann's pouch as in this case.

Diversion colitis occurs near universally following fecal diversion, but the majority of patients are asymptomatic, despite endoscopic or histologic evidence of inflammation.[1] Diversion of the fecal stream results in a deficiency of short chain fatty acid and other luminal nutrients and lack of these nutrients is thought to lead to development of colitis. Short chain fatty acids are derived from anaerobic bacterial cleavage of undigested carbohydrates and are the main energy source for colonocytes.

A minority of patients experiencing symptoms of diversion colitis mimic other forms of colitis including tenesmus, passage of bloody/mucoid stools, and urgency. Diversion colitis should be considered in patients with these symptoms with surgery resulting in diversion of the fecal stream. The differential diagnosis includes infectious colitis and stool testing for enteric pathogens should be performed. In addition, in patients with a history of inflammatory bowel disease or prior resection for colon cancer, recurrent colon cancer or active inflammatory bowel disease should be considered.

The endoscopic appearance of diversion colitis is non-specific, but the mucosa is often quite friable with development of bright erythematous marks when distending the diverted segment with air. The histologic features are also non-specific, but crypt distortion and other features of chronicity as typically seen in inflammatory bowel disease are rare.[2]

Management of diversion colitis is surgery to restore continuity of the fecal stream. However, in patients in which surgery is unable to be performed short chain fatty acid enemas are the mainstay of therapy. The initial efficacy of this treatment was established in 1989 in a small case series of four patients showing decreased luminal concentrations of short chain fatty acids and resolution of inflammation and symptoms with four to six weeks of twice daily infusions of a solution containing short chain fatty acids.[3] Short chain fatty acid enemas require preparation at a compounding pharmacy and are used twice daily for four to six weeks after which a less frequent schedule can be used. In patients with a history of inflammatory bowel disease use of topical mesalamine or topical glucocorticoids can be considered though their use in diversion colitis is limited to case reports.

This case describes a common occurrence following colonic resection with diversion of the fecal stream. Diversion colitis occurs nearly universally following fecal diversion, but as most patients have minimal symptoms other etiologies with similar symptoms need to be considered including infectious and inflammatory bowel disease. In patients who are unable to have restoration of the fecal stream, short chain fatty acid enemas are

first line therapy. As these enemas are compounded, cost can be a barrier to treatment. In this specific case a 7-day course of therapy cost $138.

REFERENCES

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