Segmental Colitis Associated with Diverticulosis (SCAD): Surgical Treatment in Mandatory Anti-Coagulation Case Report and Review of Literature

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Abstract

Purpose: Segmental colitis associated with diverticulosis (SCAD) is a distinct clinical entity from classic uncomplicated diverticulitis and inflammatory bowel disease accounting for abdominal pain, bloating, and most notably rectal bleeding. There have been a variety of modalities described for treatment ranging from: expectant management, to antibiotics and Mesalamine therapy, or immunosuppressive therapy, or surgical resection. We describe a case of one of our patients to review the unique clinical, endoscopic, and histopathological features of SCAD, as well as to highlight the role of surgical resection as first line management of chronic hematochezia secondary to SCAD in a patient with an absolute indication for anticoagulation.

Methods: Epidemiological, clinical, endoscopic and operative features, as well as management approaches of SCAD are reviewed here within the context of our patient.

Results: At 24 months after a laparoscopic left colectomy subsequent to a previous failure of medical management, our patient reports no recurrent hematochezia.

Conclusions: Early surgical intervention in SCAD may play a more prominent role in highly selected patients with SCAD who are committed to chronic anticoagulation.

Introduction

Chronic hematochezia has a broad differential diagnosis but usually is caused by a few common disorders. An uncommon clinical entity causing hematochezia is segmental colitis associated with diverticulosis (SCAD), a distinct segmental colonic inflammatory clinical entity often presenting with chronic hematochezia, occasionally associated diarrhea and abdominal pain. SCAD has been described as “chronic focal inflammation purely limited to the diverticular tract, usually the sigmoid colon, sparing the rectum and proximal colon”[1]. Unlike uncomplicated diverticulitis, only the interdiverticular mucosa is involved. This can be mild inflammation with submucosal hemorrhage, manifesting as ‘Fawaz’ spots, ranging to chronic active inflammation. Furthermore, SCAD appears to be distinct from Inflammatory Bowel Disease (IBD) lacking transmural inflammation compatible with Crohn’s Disease (CD) or Chronic Ulcerative Colitis’ (CUC) contiguous mucosal inflammation with the anorectum. Some have argued an ‘overlap’ hypothesis for unifying each process, but the distinction remains [2]. We discuss a case to illustrate the unique characteristics of SCAD and its treatment in the face of mandatory blood thinners.

Case Report

Our patient is a 74 year old white male with a significant past history of cardiac disease and a pulmonary embolism being treated with Coumadin. In May 2006 he noticed his first episode of hematochezia. A subsequent colonoscopy demonstrated pan-diverticulosis with left-sided segmental inflammatory features. Biopsies at this time were consistent with active unspecified colitis. Oral Mesalamine treatment was initiated, 1200 mg three times a day as well as Mesalamine enemas every other night. Our patient reported minor improvement, but three months later he became intolerant to oral Mesalamine. He continued using topical Mesalamine enemas three times a week.

In 2011, our patient was found to have iron deficiency anemia and underwent a second colonoscopy. He was found to have left sided segmental patchy colitis...
associated with diverticulosis (Figures 1a and 1b) thought to be unresponsive to medical treatment. Biopsies of the involved segment revealed increased chronic lymphoplasmocytic infiltrate with mild focal active inflammation. An intra-mucosal granuloma was seen, prompting the pathologist to suggest CD in the differential diagnosis. Segmental resection of the affected left colon was offered due to inadequate response to medical therapy and continued use of Coumadin.

A preoperative colonoscopy confirmed continued activity of colitis and included endoscopic mucosal tattooing to define the extent of involvement. A prophylactic inferior venocaval filter was placed.

Our patient underwent laparoscopic left colectomy (Figures 2a, 2b, and 2c). At the time of surgery, there was more extensive involvement than appreciated during colonoscopy with tattoos located in the distal transverse colon and mid rectum. The patient had an uneventful recovery and resumed Coumadin prophylaxis.

Pathologic findings revealed segmental chronic active colitis and diverticular disease. The mucosa appeared edematous and hemorrhagic. Multiple diverticula, some with features of acute diverticulitis, were present. There were no features to suggest CD or neoplasia. At twenty four months postoperative, the patient reported no recurrent hematochezia.

Discussion

Although SCAD has been described earlier, the large multicenter prospective study by Imperiali et al. gave a comprehensive endoscopic and histologic view of 5457 patients in 2000 [3]. The true prevalence of SCAD has been estimated to be from 0.25% to 1.3%. Mean age is 66.5 years. Hematochezia is the most common presentation [3,4]. Less common are alterations in bowel habits, passage of mucus per rectum, and abdominal pain. Men are more often affected than women [5, 6]. Aside from the presence of diverticulosis, radiology findings are otherwise unremarkable. Diagnosis is established by compatible endoscopic and histopathologic findings. Endoscopic features reveal a combination of congestion, hemorrhage, granularity, and occasional ulceration confined to the sigmoid colon with rectal and proximal colon mucosal sparing [1,4]. Specifically, lesions are located on the crests of the colonic fold with sparing of the diverticular orifice. Histologically, SCAD is characterized by polymorphonuclear infiltration of the epithelium and lamina propria as well as cryptitis. Furthermore, a granulomatous reaction confined to damaged crypts may be seen, but it is not usual for independent epithelioid granulomas and/or giant cells to be present [7].

In our case, there were no granulomas noted on final pathology, however the possibility of Crohn’s-like SCAD remained. This was based on patchy cryptitis mutual to SCAD and IBD [2], and the more extensive mucosal involvement noted to that is typical to SCAD. This extent and character of mucosal involvement has been described using endoscopic features: crescentic fold disease, mild to moderate ulcerative colitis-like, Crohn’s-colitis-like, and severe ulcerative colitis-like [4].

Crohn’s-like SCAD has been described in the literature as a distinct entity. Goldstein studied 29 patients originally presumed to have active CD occurring concurrently in a resected segment of colon affected by diverticular disease and found 25 patients to be free of CD at operation and pathology, and 23 of 25 free of CD at six year follow up. The other two patients developed CD in other regions of the bowel within 6 months of their operation [2]. Our patient is now 24 months out from his operation and remains free of any symptoms to suggest CD. This suggests two important features; that Crohn-like inflammation can arise in Non-CD
patients and how tissue diagnosis alone may be misleading. As a result, the importance of the visual appearance on colonoscopy is paramount. And, although SCAD is an independent entity, it is part of the same spectrum as IBD. As is the case with UC and CD, treatment options fall within a spectrum as well. Many have described SCAD as potentially being self-limited [6,8]. Others have described medical treatment options with the use of antibiotics and mesalamine [9]; or mesalamine, steroids, and/or biologic immunomodulators based on severity scores [10]. Facing the patient’s age, he would not have been a good candidate for thiopurines and facing the cardiovascular disease, he would not have been a good candidate for biologics. Our case illustrates the failure of each approach in a patient with an absolute indication for anticoagulation (history of PE). Based on persistent hematochezia, the patient may have eventually been recommended for an operation [10]. However, our success of colonic resection challenges whether the first line attempts of steroids/immunosuppressive regimens are prudent in this subclass of patients with hematochezia who require anticoagulation.

Conclusion

SCAD continues to rise as an emerging and distinct entity when evaluating patients with hematochezia. Despite existing in the same spectrum of disease as IBD, early surgical intervention in SCAD may play a more prominent role in those patients with SCAD who are committed to chronic anticoagulation.

Compliance with Ethical Standards

Conflict of Interest

The authors declare that they have no conflict of interest.

Informed Consent

Informed consent was obtained from the patient included in this case report.

References