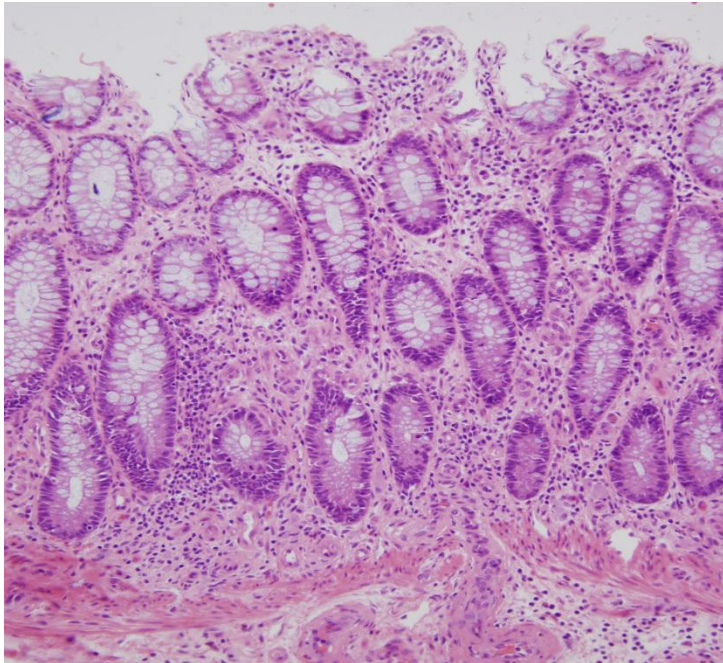
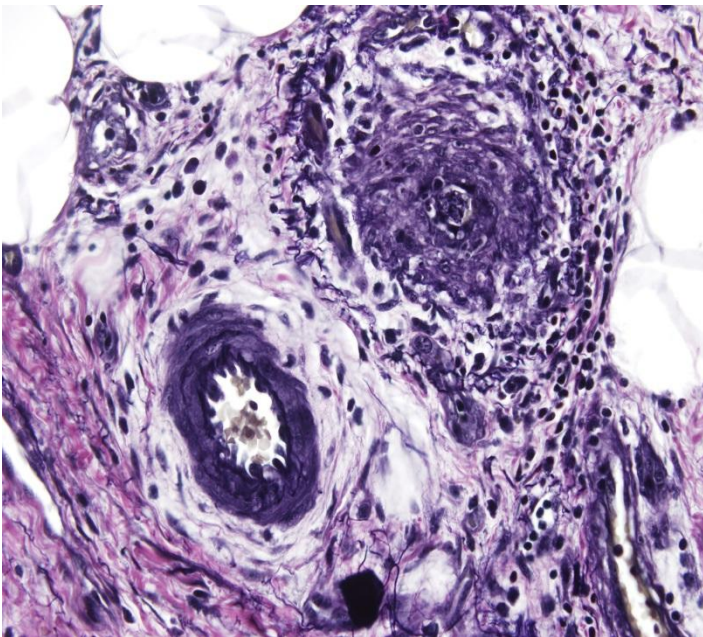
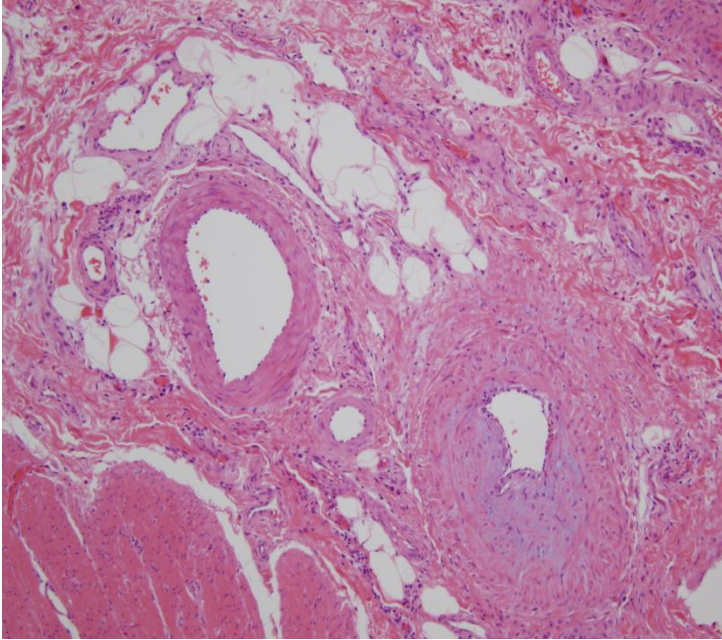


A 37-year-old man presented with a two week history of hematochezia and left lower quadrant pain. A CT scan showed inflammation of the sigmoid colon. He was initially treated with IV antibiotics with no resolution. Subsequent colonoscopy showed edematous mucosa with scattered areas of friability. Exploratory laparotomy was performed as there was a clinical concern for ischemia. The laparotomy revealed inflammation of the sigmoid colon near the base of the mesentery with thickening of the nearby omentum resulting in a sigmoid colectomy. Grossly, edematous and erythematous colonic mucosa with focal thickening of the bowel wall was noted. Microscopically the colonic epithelium was essentially normal with mild regenerative changes. No features of active or chronic colitis were present. Also noted within the subserosal adipose tissue and mesentery were abnormally thickened veins. Sections from the resection are provided below.





What is your diagnosis?

- a. Diverticulitis
- b. Polyarteritis Nodosa
- c. Idiopathic Myointimal Hyperplasia of Mesenteric Veins
- d. Chronic Radiation Colitis
- e. Angiodysplasia

SCROLL DOWN FOR ANSWER AND DISCUSSION...

Answer and Discussion:

### C. Idiopathic Myointimal Hyperplasia of Mesenteric Veins

Idiopathic Myointimal Hyperplasia of Mesenteric Veins (IMHMV) is an uncommon entity that occurs primarily in previously healthy young to middle aged men. Patients usually present with lower abdominal pain, diarrhea and rectal bleeding. The left side (usually sigmoid) of the colon is most commonly involved. Endoscopic findings may include erythema, ulceration, friability and cobblestoning, which can be erroneously diagnosed as inflammatory bowel disease. Mucosal biopsies usually show some degree of ischemic changes (i.e., loss of surface epithelium, reactive changes within crypt epithelium, and hypereosinophilia of the lamina propria). Dilatation and hyalinization of the lamina propria capillaries is a characteristic finding (Figure 1 and Figure 2). The diagnosis is usually confirmed in resection specimens, which reveal concentric thickening and progressive occlusion of submucosal and subserosal veins owing to smooth muscle proliferation in the intima and media. Inflammation is characteristically absent. An elastic stain can help to distinguish thickened veins from accompanying arteries, which appear normal. The pathogenesis of this disorder is unknown; however, some authors suggest that fistulization of the small arteries and veins leads to abnormally high venous pressures. Another hypothesis is that this process represents the end-stage of mesenteric phlebitis (enterocolic phlebitis). Surgical resection of the affected bowel is curative.

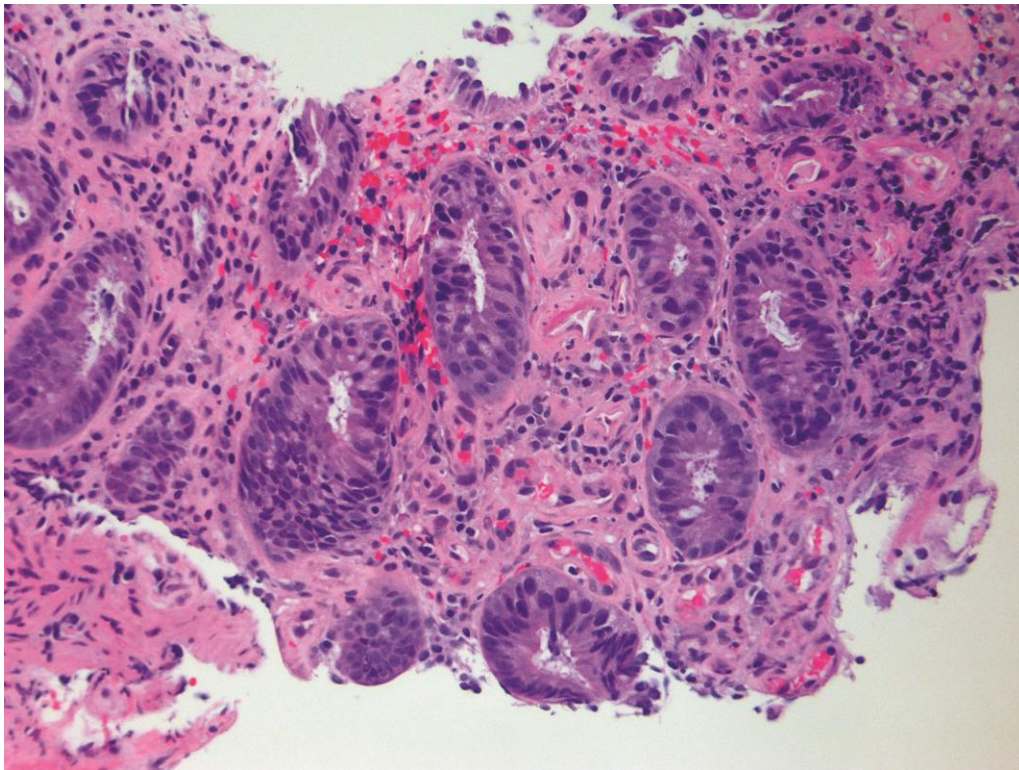


Figure 1: A biopsy from a patient with IMHMV shows ischemic changes including hypereosinophilia of the lamina propria and regenerative colonic crypts.

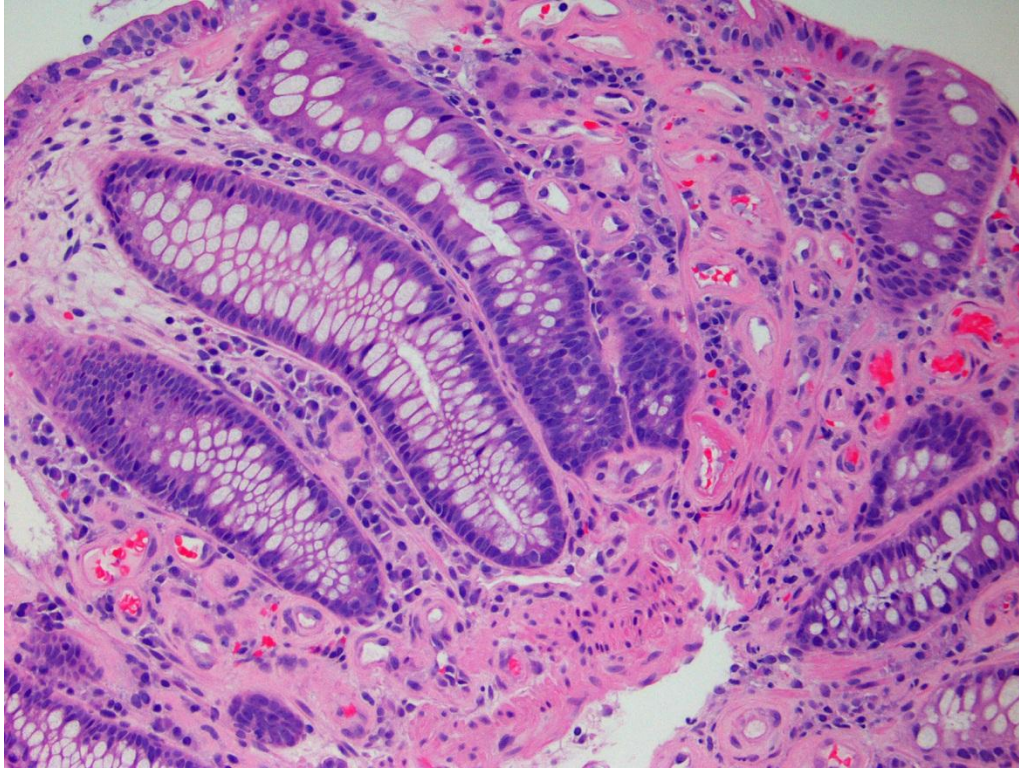


Figure 2: Small mucosal vessels are accentuated by thick, hyalinized walls in a better-preserved area.

The differential diagnosis for IMHVMV includes the entities above. Diverticulitis is also most commonly seen in sigmoid colon and characterized with thickening and shortening of the bowel with gross and microscopic outpouchings of the colonic mucosa through the muscularis propria with an associated acute inflammatory infiltrate. Vascular structures are not involved.

Polyarteritis Nodosa most commonly involves small intestine and the histology is characterized by transmural fibrinoid necrosis of the artery wall with a mixed inflammatory infiltrate, without venous involvement. The mucosa will show features of ischemic injury.

Chronic radiation colitis commonly affects distal rectum. Features of chronic mucosal injury including crypt architectural disarray, atrophy and, Paneth cell metaplasia can be seen. Lamina propria is usually hyalinized and may have vascular ectasia and reactive epithelial atypia. Also noted are mural fibrosis and atypical fibroblast proliferation with arterial intimal hyperplasia and hyalinization.

Angiodysplasia is an acquired lesion and the second most common cause of lower GI bleed in elderly population. It is most commonly located in right colon. The diagnosis on biopsy specimens may be difficult since most of the dilated veins reside in submucosa. In some cases however, the dilated, abnormally tortuous vessels may extend to the mucosa. Thickening of the mural veins is not observed.

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