

Mesenteric Venous Thrombophlebitis in the Setting of Acute Diverticulitis

Maqqie E. Jones-Carr, Julia Enos, Chinenye Iwuchukwu*

University of Mississippi Medical Center, Department of Surgery, Jackson, Mississippi



CASE PRESENTATION

The patient was a 37-year-old male with a past medical history of hypertension and asthma who presented to the emergency room with a several-day history of **fever, myalgia, and intermittent abdominal pain**. He had continued to have normal bowel function. His medical history was otherwise non-contributory. He was initially febrile to 103 F and **hypotensive but fluid-responsive**. On physical exam he was tender in the bilateral lower quadrants of his abdomen. His admission labs were significant for a white blood cell count of 12.7.

A CT abdomen/pelvis with IV contrast was suboptimal due to patient motion, though there was **central mesenteric stranding, pelvic inflammation near sigmoid diverticuli, and possible central mesenteric venous intraluminal air** but no associated portal venous gas. He was subsequently admitted, started on broad spectrum antibiotics and kept NPO.

His initial blood cultures revealed *E. coli* and *Strep parasanguineus* bacteremia. By hospital day 3 he reported less abdominal pain and was given a clear liquid diet. However, on hospital day 4 he was again febrile with a **rising white blood cell count, now to 19.3**. He was again made NPO and a repeat CT scan was performed (see images). This showed **progression of the thrombophlebitis of his superior and inferior mesenteric veins, with partial superior mesenteric venous thrombosis**.

There was no evidence of perforation or ischemia. He was started on a **heparin infusion** and continued his IV antibiotics with the assistance of infectious disease. Surgery was again discussed with the patient but he remained adamant that he did not want an ostomy.

After that point, He remained afebrile with a down trending white blood cell count. His abdominal pain resolved, and he was eventually able to tolerate a regular diet. After completing a prolonged course of IV antibiotics, he was **discharged on hospital day 13** on a direct acting oral anticoagulant and additional PO antibiotics. He was scheduled for follow-up in our general surgery clinic but cancelled several times and was unable to be reached by phone.

IMAGES

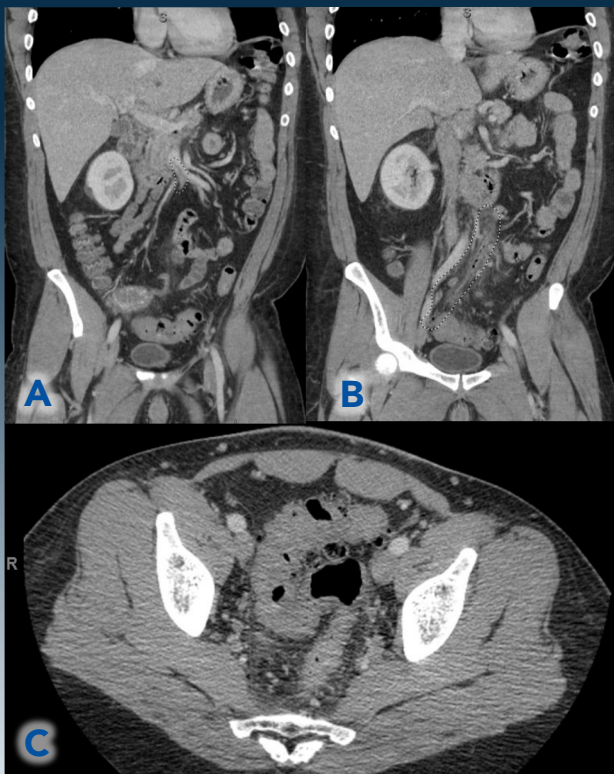


Figure 1. CT revealing concern for infectious thrombophlebitis, ongoing sigmoid diverticulitis (C). This also revealed partial SMV thrombosis with intravenous air (A,B), and a heparin infusion was started.

DISCUSSION

Acute diverticulitis can be classified as uncomplicated or complicated, specifically due to the presence of entities such as **abscess, perforation, or peritonitis**. Complicated diverticulitis with abscesses or small, contained perforations can usually be managed with bowel rest, antibiotics, and radiologic drainage, whereas patients with diffuse peritonitis mandate surgical intervention.¹

In the acute setting, **partial colectomy with anastomosis and proximal diversion is becoming the mainstay of surgical management**, though unstable patients may mandate Hartmann's (sigmoid colectomy with end colostomy).¹ For patients that do not require surgery in the acute setting, **elective sigmoid colectomy could be considered** to prevent further bouts of diverticulitis, though this is being challenged as of late, as the first bout is usually the worst and nonoperative management is still fruitful.²

Pylephlebitis, or acute suppurative thrombosis of the portal vein, is a morbid entity which can be seen with a variety of intraabdominal pathologies, most frequently **appendicitis or diverticulitis**, as we saw here.³ It is frequently associated with **hypercoagulability**; organisms are typically **polymicrobial**.³ Antibiotics with anticoagulation are the usual treatment, and surgery if the offending pathology does not improve.³

Cases similar to ours have been described in the literature. Zia et al. successfully managed a patient with pylephlebitis secondary to acute diverticulitis with antibiotics, anticoagulation, and interval colectomy at 3 months.⁴

REFERENCES

- Francis NK, Sylla P, Abou-Khalil M, et al. EAES and sages 2018 consensus conference on acute diverticulitis management: Evidence-based recommendations for Clinical Practice. *Surgical Endoscopy*. 2019;33(9):2726-2741. doi:10.1007/s00464-019-06882-z
- Hawkins AT, Wise PE, Chan T, et al. Diverticulitis: An update from the age old paradigm. *Current Problems in Surgery*. 2020;57(10):100863. doi:10.1016/j.cpsurg.2020.100863
- Spelman D. Pylephlebitis. UpToDate. <https://www.uptodate.com/contents/pylephlebitis>. Accessed January 27, 2023.
- Zia A, Sohal S, Costas C. Pylephlebitis: A case of inferior mesenteric vein thrombophlebitis in a patient with acute sigmoid diverticulitis—a case report and Clinical Management Review. *Case Reports in Infectious Diseases*. 2019;2019:1-4. doi:10.1155/2019/5341281