

Acute Peritonitis: A Case of Severe Inflammatory Bowel Disease Unmasked by Pregnancy

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Introduction

- Inflammatory bowel disease (IBD) has a well-known incidence in females of reproductive age, but IBD onset during pregnancy has not thoroughly been evaluated.¹
- This may be attributed to the fact that common diagnostic procedures are avoided in pregnant females, thereby preventing prompt diagnosis and treatment.

Case Description

- 17-year-old female, with a medical history of recent vaginal delivery, who presented to the ED with abdominal pain, rectal bleeding, and progressively worsening diarrhea.
- History of bloody diarrhea, with the onset of symptoms in her second trimester, attributed to hemorrhoids.
- Transvaginal ultrasound imaging was suspicious for retained products of conception for which the patient underwent dilation & curettage.
- On hospital day #2, the patient developed acute peritonitis with septic shock.
- Emergent exploratory laparotomy showed sigmoid perforation with purulent peritonitis leading to sigmoid resection.
- A secondary operation intended for end-colostomy creation revealed three focal areas of perforation within the cecum, leading to ileocecectomy.
- Pathology showed severely active colitis, crypt abscess formation, with submucosal involvement in the cecum and sigmoid favoring ulcerative colitis (UC).
- On POD #16, removal of the patient's wound vac revealed a mottled transverse colon with necrosis of descending colon & frank perforation leading to a total abdominal colectomy.

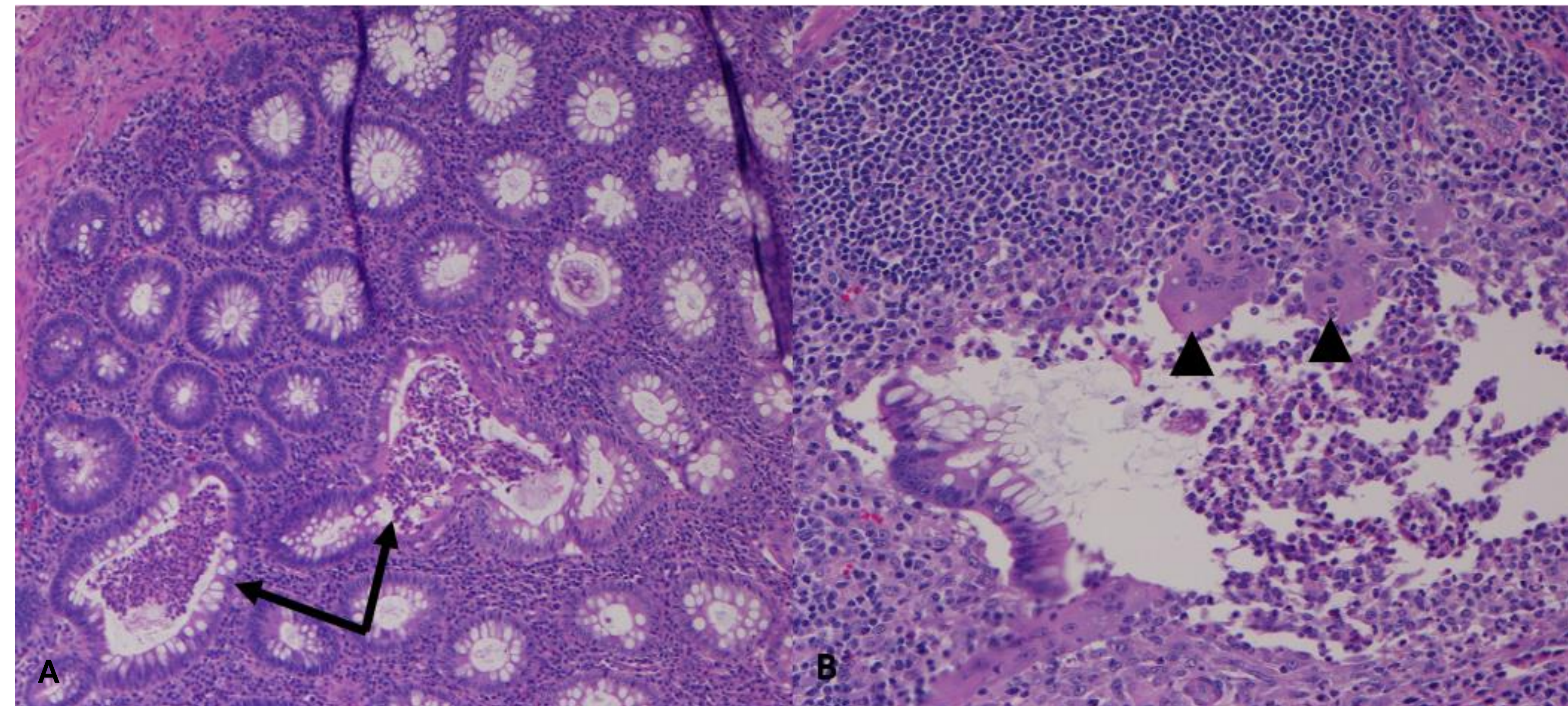


Figure 1: H&E stained tissue sections show crypt abscess formation (arrows) with multinucleated giant cell formation (arrowheads) A: 10X, H&E; B: 20X H&E

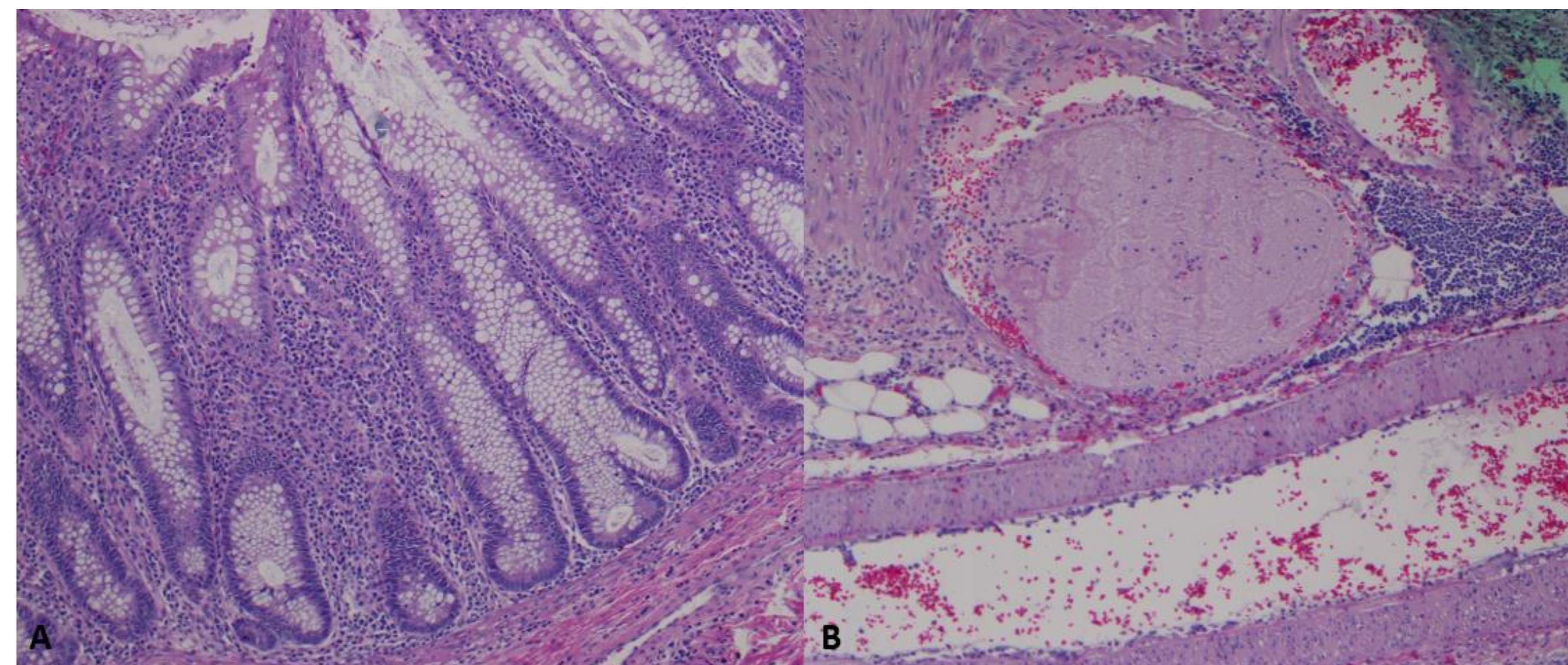


Figure 2: H&E stained tissue sections show crypt architecture distortion and crypt dropout. Focal fibrin thrombi are seen adjacent to the muscularis propria A: 10X, H&E; B: 20X H&E

Discussion

- Diagnosis of IBD during pregnancy is not a well-characterized phenomenon.
- Some studies suggest that alteration of the gut microbiota during gestation is an inciting factor.²
- It is posited that pregnancy induces an inflammatory state with a Th2-related cytokine profile, which shares characteristics with the immunopathogenesis of UC.^{2,3}
- IBD onset in pregnancy may favor UC predominance, as seen in our patient.
- Furthermore, uncontrolled IBD is associated with increased intrapartum risks for female patients.³
- Earlier diagnosis of IBD allows for more prompt treatment with disease-modifying agents, achieves earlier periods of disease remission, and prevents devastating complications for both mother and child.^{4,5}
- Our case highlights how delayed recognition of underlying IBD within pregnancy resulted in detrimental disease-related complications.

Special note: Pathology images were not available at the time of submission. Thank you to Geisinger Medical Center Pathology Department for staining and procuring these images. References can be provided upon request