The First Reported Case of Diversion Colitis Resulting in Perforation and Abscess Formation Benjamin Hart DO, Sarah Diaz DO, Jon Hain MD IEALTH[®]Syste Henry Ford Macomb Hospital, Clinton Township, Michigan



Introduction

- Diversion colitis is a condition in patients after colostomy in which the de-functioned segment of colon undergoes microscopic or macroscopic inflammatory changes
- Symptoms are typically only present in one third of patients and include bleeding per rectum, abdominal pain, and tenesmus¹
- Perforation and abscess involving a defunctioned segment of colon is rare and has never been formally discussed

Case Description

- A 67 year-old male with a history of end colostomy with mucous fistula creation secondary to severe diverticular disease presented to ER with abdominal pain and fever
- CT abdomen and pelvis demonstrated a retroperitoneal abscess communicating with the adjacent de-functioned descending colon
- The patient was treated conservatively with • antibiotics and CT guided drainage
- One week later, the drain was interrogated and demonstrated resolution of the fluid collection with no communication to the retroperitoneum. The drain was subsequently removed

Radiographic Findings



Figure 1: Axial CT imaging indicating a retroperitoneal abscess communicating with the adjacent de-functioned descending colon



Discussion

- Diversion colitis is thought to occur in most, if not all cases of fecal stream diversion
- Symptomatic diversion colitis occurs in up to one third of patients with de-
- functioned colon
- Theories of its pathogenesis include disruption of bacteria symbioses and ischemia related to the lack of short chain fatty acids²
- Treatment consists of short chain fatty acid enemas; however rarely patients do require colectomy³
- Perforation is unlikely due to the lowpressure system of the de-functioned segment of colon after diversion

Bibliography

1. Ma CK, Gottlieb C, Haas PA. Diversion colitis: a clinicopathologic study of 21 cases. Hum Pathol. 1990 Apr;21(4):429-36. doi: 10.1016/0046-8177(90)90206-k. PMID: 2318485. 2. Tominaga K, Kamimura K, Takahashi K, Yokoyama J, Yamagiwa S, Terai S. Diversion colitis and pouchitis: A mini-review. World J Gastroenterol. 2018 Apr 28;24(16):1734-1747. doi: 10.3748/wjg.v24.i16.1734. PMID: 29713128; PMCID: PMC5922993. 3. Pal K, Tinalal S, Al Buainain H, Singh VP. Diversion proctocolitis and response to treatment with short-chain fatty acids--a clinicopathological study in children. Indian J Gastroenterol. 2015 Jul;34(4):292-9. doi: 10.1007/s12664-015-0577-0. Epub 2015 Aug 6. PMID: 26243588.