Small Bowel Obstruction resulting from Meckel's Diverticulum Enterolith

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Introduction

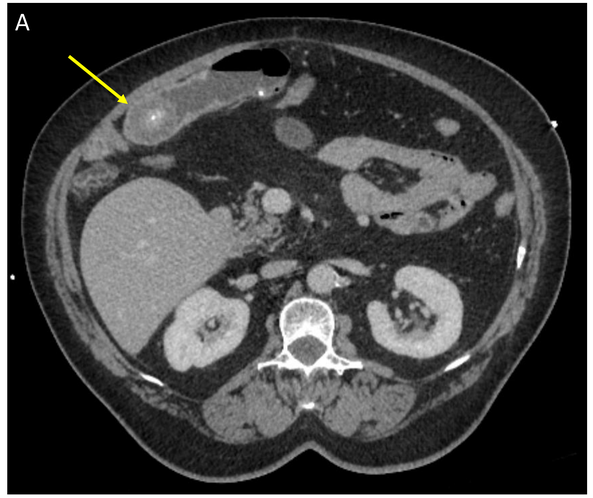
Meckel's diverticulum [MD] is the most common congenital abnormality of the gastrointestinal tract and infrequently a source of bleeding[1]. Another uncommon complication from this diverticulum is obstruction. The underlying mechanism of obstruction varies, but occasionally is caused by an enterolith that has formed within it. In our review of the literature, only 31 such presentations have previously been reported since 1950[2]. We present our 72 year old female who presented with mechanical small bowel obstruction from Meckel's diverticulum fecalith.

Presentation

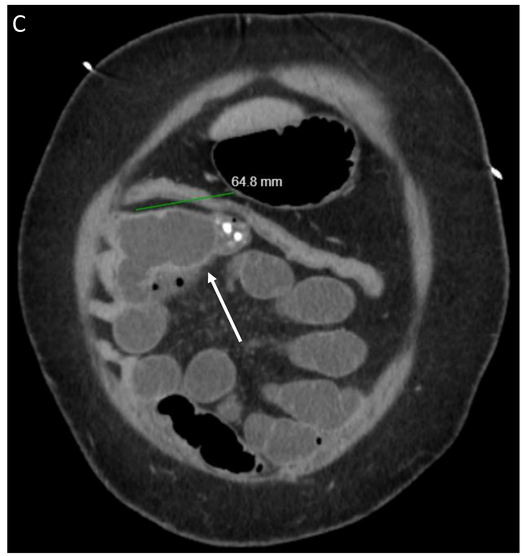
- 72 year old female with 3 days of diffuse abdominal pain; nausea; and nonbloody, nonbilious emesis
- Loose bowel movements, last flatus less than 12 hours prior
- History of controlled diabetes; BMI 32; no anticoagulation use
- Past surgery: laparoscopic cholecystectomy and three c-sections
- Distended abdomen with left lower quadrant tenderness
- Leukocytosis of 14; normal bicarbonate at 23; creatinine 0.67
- CT imaging suspicious for a bezoar transition point in distal small bowel [A] with proximal 6cm blind ending loop of small bowel [C]

Procedure

- Exploratory laparotomy; transition point [B] and diverticulum were transected together with obstructing enterolith [D]
- Postop course significant for an expectant ileus requiring TPN and midline subcutaneous hematoma requiring evacuation
- Return of bowel function postop day 9 and discharge on day 13
- Baseline bowel habits and health at subsequently postop clinic visits. Patients midline wound is also healing well
- Pathology returned with chronic inflammation in the MD, negative for ectopic tissue









Discussion

- Incidence of enterolith is rare at 0.3-10%[3]
- Median age of presentation is 58 years old, with 73% male. Enteroliths are also most frequently in the terminal ileum [58%], with 38% residing in the MD[2]
- Pathophysiology for enterolith formation is theorized to be secondary to stagnant fecal content from abnormal diverticulum peristalsis[4]; or in cases without associated ectopic gastric mucosa, an alkaline environment that favors mineral precipitation[3]
- Obstruction results rarely from either enterolith expulsion into distal small bowel[3] or MD directly compressing the bowel itself[5,6]
- There are several proposed management options. These range from breaking up and milking the enterolith anterograde into the cecum[7]; milking it proximally into less edematous bowel and removal via enterotomy[8]; or diverticulum resection with the enterolith milked into the MD[2]
- A minimally invasive laparoscopic approach may be possible in select patients; however may be challenging if the majority of small bowel is dilated given the usual anatomic location of a MD[2]
- To date, there have been no documented minimally invasive surgical [MIS] attempts at management in the literature. Future studies may be able to review whether non-operative management would be an option or if surgery is mandatory. If surgery is mandated, MIS is likely an acceptable option that should be further explored.

References

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