

Abstract

A fecalith is a mass of accumulated hardened fecal matter that usually arises in the colon, most commonly the sigmoid and the rectum. Very rarely does a fecalith appear in the small intestine. GISTs are rare soft tissue sarcomas that can occur anywhere along the gastrointestinal tract.

It is documented in the literature that a fecalith can mimic tumors. However, this report is the first documented case of a fecalith obscuring the presentation of a GIST, and even more unique given it was found in the cecum. Thus, the seemingly benign presentation of a fecalith may be a more concerning manifestation and consequently prompt further workup.

A 58-year-old Hispanic male with a past medical history of HIV and melanoma, presented to the ED with a week of right lower quadrant abdominal pain. Physical exam was remarkable for severe pain on deep palpation of the right lower quadrant. A CT abdomen/pelvis scan was significant for colonic wall thickening, a “mass-like structure” in the cecum extending to the level of the ileocecal valve and enlarged peri-colonic lymph nodes. Laboratory studies and vitals were normal and tumor markers, carcinoembryonic antigen, CA 19-9, and CA-125, were negative. A colonoscopy was performed that showed a large fecalith in the cecum. After a failed attempt at removing the fecalith via colonoscopy, the patient underwent laparoscopic hand-assisted right colectomy the following Monday. The surgery was successful, and the patient’s postoperative course was unremarkable. He was discharged on postoperative day seven.

The pathology report indicated that the mass-like fecalith structure was a low-grade multifocal GIST of spindle cell type involving 5 cm of the bowel wall, 2 mitoses per 5mm², Ki 67 was less than 5%, pT2N0. A GIST neotype profile indicated the tumor was of the KIT D820G (Exon 17) missense mutation variant. It was decided the patient would benefit from oncology follow-up for adjuvant imatinib as well as follow up CT scans once every 3 months.

This case report depicts an unusual presentation of a fecalith and GIST in the cecum. While the patient underwent a thorough workup, the true etiology of his abdominal pain was not realized until surgery. This was likely due to the large fecalith’s atypical location that obscured the presentation of the GIST. This case report is of clinical relevance because it depicts a diverse way that GISTs may present and can hopefully expedite the recognition and appropriate treatment of similar cases.

Introduction

- A fecalith arises in the sigmoid colon, the rectum and small intestine
- Fecaliths are benign obstructions and can be obstructions leading to bowel perforation
- Fecaliths may be fixated to the gastrointestinal mucosa like GISTs
- GISTs soft tissue sarcomas along the gastrointestinal tract
- Seen in males in the fifth to sixth decade
- Located in the jejunum or ileum
- GISTs are seen in one to two per 100,000
- Prevalence of 13 people per 100,000. It is well documented in the literature that a fecalith can mimic a GIST and other colonic tumors This report is the first documented case of a fecalith discovered in association with a GIST
- Found in the cecum
- Thus, the seemingly benign presentation of a fecalith may be a more concerning manifestation of malignancy, such as in this case, and consequently prompts further workup.

Case Presentation

- 58-year-old Hispanic male
- **Past medical history:** HIV, GERD, obstructive eosinophilic colitis, melanoma, and diverticulitis s/p Hartmann’s procedure in 2017
- **Presentation:** one-week RLQ abdominal pain
- **Negative for:** fever, chills, nausea, vomiting, diarrhea, change in bowel habits or significant weight loss
- Family medical history: GIST in his mother, brother, maternal uncle, and cousin
- **Physical examination:** afebrile with stable vitals, alert, oriented and in mild acute distress secondary to significant abdominal pain
- **Abdominal exam:** well-healed midline scar and severe pain elicited on deep palpation of the right lower quadrant
- **Laboratory studies:** no leukocytosis but a slight left shift
- **Tumor profile:** markers included normal carcinoembryonic antigen, CA 19-9, and CA-125
- **Imaging:** CT abdomen/pelvis significant for colonic wall thickening and a “mass-like structure” in the cecum extending to the level of the ileocecal valve, enlarged pericolic lymph nodes and inflammation

Further workup:

- Colonoscopy show a large fecalith in the cecum
- Failed attempt at removing the fecalith during the colonoscopy
- Successful resection with laparoscopic hand-assisted right colectomy
- Postoperative course was unremarkable with good recovery
- He remained hemodynamically stable, tolerated a regular diet with recovery of bowel function
- Discharged home with home health care on postoperative day seven



Figure 1. Surgical resection of the fecalith in the cecum .



Figure 2. A 6 cm mass, later identified as a GIST, was present within the core of the fecalith.

Results

- Pathology report:
- Mass-like fecalith structure was a low-grade multifocal GIST
- Spindle cell type involving 5 cm of the bowel wall
- 2 mitoses per 5mm², Ki 67 was less than 5%, pT2N0
- Neotype profile was of the KIT D820G (Exon 17) missense mutation
- Recommendation for outpatient oncology follow-up for adjuvant imatinib
- Follow up CT scans once every 3 months.

Discussion

This case report is unique given the associated presentation of a fecalith with a GIST in the cecum. While the patient underwent a thorough workup, the true etiology of his abdominal pain was not realized until surgery. This was likely due to the large fecalith that masqueraded the presentation of the GIST.

Colonoscopy with biopsy is the gold standard and may often be nondiagnostic

- Incomplete in up to ten percent of patients
- Complicating factors: intestinal tortuosity and redundancy, fixation of colonic loops to the peritoneal cavity, presence of strictures, obstructing masses, and limitations in scoping tools
- Diagnostic testing limitations in cecal lesions: right-sided lesions are exophytic, nonspecific signs of a gastrointestinal bleed and anemia
- Left-sided colonic lesions: infiltrative and cause obstructive symptoms
- Right-sided colon lesions: have a higher mortality rate than left-sided colon

Atypical presentation of a GIST

- Hyperdense enhancing solid masses on contrast-enhanced CT
- Rarely heterogeneous if there is necrosis, hemorrhage, or degeneration within a very large tumor.
- In this case: this patient’s tumor was covered by a hypodense mass in the setting of diffuse asymmetric colonic wall thickening with pericolic inflammation
- GIST contains GI mucosa overlying the lesion, this tumor had a light brown, friable consistency
- Symptomatic GISTs ulcerate and bleed, this patient’s tumor was not bleeding and had symptoms consistent with obstruction secondary to a large fecalith

Presentation of a cecal GIST in association with a fecalith prompts inquiry into pathophysiology

- Interstitial cells of Cajal (ICC) are pacemaker cells of the gut and progenitor cells of GISTs
- ICC are important players in the symphony of gut motility
- Role in orchestrating normal peristaltic activity of the digestive system
- Absence or reduction in number can affect GI system motility
- Thus, the effect ICC cells have on GI motility can lead to the formation of a fecalith.
- Atypical ICC inhibit the normal passage of stool and lead to the formation of a fecalith
- Benign presentation of a fecalith may be a more concerning manifestation of tumors such as GISTs and consequently prompt further workup.

Conclusions

This case report augments the literature as the first documentation of a cecal GIST associated with a fecalith. Diagnosis was challenging in this case due to the masquerading effect of the overlying fecalith. The pathophysiology was surprising given the unique location and presenting symptoms of this GIST. The clinical relevance of this case report lies in the ability to share the diverse ways that GISTs may be present to hopefully expedite the recognition and appropriate treatment of similar cases.

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