



Unusual Case of Colonic Intussusception Caused by Angiolipoma: Case Report and Literature Review

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Abstract

Angiolipomas are benign tumors composed of adipose tissue commonly found in the subcutaneous tissue with vascular proliferation. It is uncommon to find it in the gastrointestinal tract. This report focuses on an angiolipoma found in the sigmoid colon causing intussusception in a young healthy 26-year-old male. We discuss the presentation, workup and surgical management.

Keywords

- ▶ Angiolipoma
- ▶ intussusception
- ▶ tumor
- ▶ abdominal mass
- ▶ adipose tumor

Case Presentation

In this case report, we have a young 26-year-old male patient with no past medical or surgical history, who presented to the ED with colonic intussusception. His symptoms upon presentation were 5 days of abdominal pain, nausea, vomiting and hematochezia. His labs were overall unremarkable, not showing any leukocytosis or anemia. After undergoing imaging, his CT scan of the abdomen/pelvis demonstrated colonic intussusception due to a likely underlying mass. After undergoing exploratory laparotomy, he was found to have a mass within the lumen of the sigmoid colon. After sending it to pathology, it returned as an angiolipoma.

Background (Literature Review)

Angiolipomas are benign tumors that are made of mature adipose tissue and proliferating blood vessels. These tumors are most often found in the subcutaneous tissue of the extremities and trunks in healthy young men. Frequently multiple lesions will appear in the same patient. Although familial cases of angiolipoma have been identified, the cytogenetic aberration

has yet to be found.^{1,2} Treatment of superficial angiolipoma most often consists of marginal excision of the lesion resulting in good clinical outcomes and rare recurrence rates.³ Angiolipoma of the colon is a rare phenomenon with only 19 cases found in a PubMed search. Additionally, intussusception as a complication of angiolipoma has only been described in 6 cases. We report a colonic angiolipoma causing intussusception in a young male patient.

While subcutaneous angiolipoma of the extremities and trunk commonly presents with pain on palpation, the few documented cases of angiolipoma in the colon present most often with diffuse abdominal pain, a change in bowel habits, and hematochezia.⁴ In most cases, the decision to remove the colonic angiolipoma was made after identifying a suspicious mass on enhanced abdominal computer tomography (CT) imaging or colonoscopy. In cases of intussusception, the angiolipoma is often identified as the lead point of the invagination. Imaging and endoscopy often aid in the diagnosis, but histopathological examination after removal is the gold standard for identifying angiolipoma.⁵

Treatment of angiolipoma of the colon is varied depending on size and location of the lesion. Small polyps are often

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removed during colonoscopy by polypectomy.⁶ Polyps that are sufficiently large or present with a broad base are difficult to remove by polypectomy and often require surgical excision to reduced risk of hemorrhage or perforation.⁷ Some cases have demonstrated good clinical outcomes through the use of minimally invasive laparoscopy. Vandamme et al.⁸ and Kato et al.⁹ describe cases of cecal angiolipoma being successfully treated without recurrence by laparoscopic ileocecostomy. In the 6 documented cases complicated by intussusception, segmental resection was the treatment of choice with 4 choosing a laparoscopic approach¹⁰⁻¹³ and 2 choosing an open approach.^{14,15} Complete resection of the effected colon segment leads to an excellent prognosis and there has been no reported recurrence with adequate surgical resection.¹⁰

Subjective Data

A 26-year-old male patient presented to our hospital complaining of lower abdominal pain that started 5 days prior to admission. He described the pain as sharp and stabbing in nature and radiating to his lower back. His pain did not improve and began experiencing nausea and vomiting. He reported passing gas. He noticed specks of blood and mucus on his last bowel movement which was 4 days prior. No chills, fevers or shortness of breath were reported. He was using ibuprofen and acetaminophen to control his pain, but the severity increased and decided to report to the ED for further evaluation. His past medical and surgical history was unremarkable. He reported occasional vaping, social alcohol use and daily marijuana. No family history of colon or GI malignancy, however, his mother reported a history of Crohn's well control with medication.

In the ED patient's vitals were appropriate for his age, no hypotension or tachycardia noted. His physical exam was significant for abdominal distention and tenderness on his left lower quadrant but no diffuse tenderness or guarding throughout abdomen. CBC and CMP labs were draws which were unremarkable except for mild hypokalemia at 3.2. A CT scan with IV contrast was then ordered by ED staff to investigate further.

CT Findings

On coronal view (→**Fig. 1**), telescoping loop with descending colon extending into the sigmoid colon was appreciated, indicating an intussusception. Based on this presentation's nature, this could indicate an underlying mass. A follow-up scan with rectal contrast for further evaluation was then ordered.

At this point general surgery was consulted. A thorough history and physical examination were done. The patient was admitted started on fluid and electrolyte replacement, made NPO and a CT scan with IV and rectal contrast was ordered. Coronal view (→**Fig. 2**) again revealed colonic intussusception with a proximal thickened wall of the intussusceptum likely due to an underlying mass. No obstruction, perforation or free air identified. No other acute findings, including enlarged adenopathy, were identified on imaging.



Fig. 1 coronal view with arrow pointing at sigmoid colon intussusception.



Fig. 2 coronal view with rectal contrast, arrow pointing at sigmoid colon intussusception.

Although patient remained hemodynamically stable, his pain continued to aggravate despite pain medication. After reviewing CT images, the patient was consented for exploratory laparotomy. An informed consent was obtained, and patient was taken to the OR.

Operation

Midline laparotomy done. A large Alexis retractor was placed. The small bowel and omentum were eviscerated. The descending colon was then identified and followed distally towards the sigmoid colon. The intussusception was found in the distal sigmoid colon. Inflammation was found surrounding this area, but no perforation was noted. The descending colon was mobilized by taking the white line of Toldt using Bowie

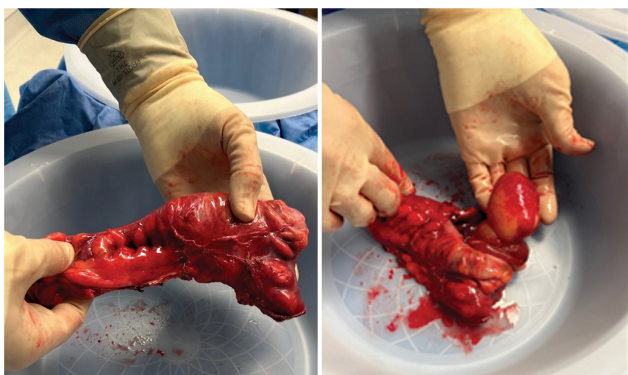


Fig. 3 Sigmoid specimen with soft tissue mass causing intussusception (arrow).

electrocautery all the way to splenic flexure. The spleno-colic ligament was identified and divided to gain more mobilization in our colon. When taking the white line of Toldt the ureter was identified and followed distally at its cross points making sure it was off our field during our dissection, also confirmed at end of the case. Proximal to the intussusception a healthy portion of the sigmoid colon was identified, a small window was made in the mesentery and 2x Endo-GIA purple load staple load across were fired. Using LigaSure device the mesentery was then taken down to healthy-appearing sigmoid colon passed the intussusception near the rectosigmoid junction. At this point 2 x Endo-GIA purple load staple loads were fired. The specimen was then removed, about 20 cm of sigmoid colon, and passed off the field.

In the back table the specimen was opened, and a benign appearing mass was identified in the intussusception (► **Fig. 3**). The specimen was sent to pathology.

At this point, both ends of the colon were then approximated and we noted to have good approximation without tension. At this point we decided to do an end-to-end primary anastomosis using an EEA circular stapler. On the proximal end of the colon the staple load was removed, and the anvil was inserted, a purse string was then placed using 2-0 PDS around and tied down to secure the anvil in place. A 24 mm Sizer was then introduced into the rectum without tension. An EEA circular stapler was then introduced into the rectum all the way to the rectosigmoid junction. The EEA stapler was then opened exposing the probe which was then attached to the anvil at the end of the colon. Finally, the EEA stapler was closed and fired to complete the anastomosis. Two donuts were obtained after stapling. The anastomosis was then tested for any leaks by placing the patient in reverse Trendelenburg and filling the pelvis with warm water. Air was introduced into the rectum using a bulb suction device and clamping the proximal end of the anastomosis, no leaks were noted. The Alexis retractor was then removed.

Abdomen was then closed. Bilateral tap block was done by anesthesia staff. The patient was then awakened and extubated and transferred to PACU in stable condition.

Conclusion

Though most common in the subcutaneous tissues, this case represents a rare instance of angiolipoma located in the colon. As this is a benign tumor, complete resection is the main treatment without any further management. Similar cases in the past show that resection of the area is sufficient without any recurrences. In patients with abdominal pain, where CT shows intussusception in the colon – angiolipoma should be included in a differential in young patients without any prior medical history.

Conflict of Interest

None.

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