Colonic Lipoma, A Rare Cause Of Adult Intussusception

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Abstract

The submucosa of the colon is a rare site for the formation of lipomas, which are usually clinically insignificant. A 54 year-old male presented with a two week-long history of abdominal pain. Imaging noted an intussusception of the colon. Pathology identified a submucosal lipoma as the intussusceptum. The intussuscepted mass was resected via a laparoscopic approach. This case demonstrates that colonic lipomas can cause significant obstructive pathology and can be excised from a minimally invasive approach.

KEYWORDS: benign tumor, colon, intussusception
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A 54y man presented to the clinic with a one-week history of crampy abdominal pain that was relieved by stooling. He had no personal or family history of colon cancer. He had a history of a normal sigmoidoscopy three years prior and a CT scan of abdomen and pelvis performed 6 months prior that was also normal. He was sent home with stool softeners for apparent constipation.

A week later, he was seen by the Surgical Service for acute abdominal pain. His stools had decreased in frequency and he began passing only mucus. He was hemodynamically stable and his exam only demonstrated tenderness in the left lower quadrant of the abdomen. Admission labs showed no abnormalities. CT scan of the abdomen was concerning for intussusception of the colon at the splenic flexure. Because of the unusual presentation, he underwent a colonoscopy that showed a necrotic smooth walled mass at 65 cm. Biopsy showed fibroadipose tissue with fat necrosis and associated inflammation. He then underwent a laparoscopic segmental colectomy. Pathology demonstrated a 6 cm lipoma as the focus of the intussusception.

Intussusception is rare in adults, reported as between 0.003-0.02% of all hospital admissions. It represents 1% of all bowel obstructions and can present as acute, subacute or chronic. (Azar) This patient demonstrates a common presentation, crampy abdominal pain with occasional nausea or vomiting. It is caused by the invagination of one segment of the gastrointestinal tract into the next. Any lesion in the bowel wall that alters peristalsis can initiate the invagination process.

Secondary intussusceptions, which are caused by organic lesions, represent 70-90% of all adult intussusceptions. (Azar) The etiology of these lesions is dependent upon location. One oft-quoted review showed that in the colon, intussusception is caused by malignant tumor twice as frequently as by a benign mass. (Felix) However in the small bowel, this ratio is reversed. A more recent analysis of tumor spectrum in intussusception noted that of the benign causes in both enteric and colonic intussusception, lipoma was the most frequent cause. (Chiang)

Lipomas of the colon are probably more frequent than is generally recognized clinically. Autopsy studies have shown between 4 and 5% incidence in colonic lipomas. (Ryan) They usually occur between the fifth and sixth decades of life and are often incidental findings during colonoscopy or surgery. Colonic lipomas are generally submucosal lesions. Clinically, it is not until they are larger than 2 cm, that they start causing symptoms. They can cause bleeding, obstruction and intussusception. They are often mistaken for other neoplasms radiographically, but if seen endoscopically, have a characteristic smooth yellow polypoid appearance. There are three signs that contribute to the diagnosis (Jiang): the “cushion sign” (probing yields a pillow like indentation), the “tenting effect” (grasping overlying mucosa with forceps gives a tented appearance, and the “naked fat sign” (fat extrudes out of the biopsy site).

Treatment of colonic lipomas can be safely performed endoscopically if small. However, lipomas larger than 2 cm are thought to have an increased risk of colonic perforation. For the symptomatic patient, or one in which pathology is unknown, colon resection is an accepted form of treatment. There are fewer than a dozen reports of laparoscopic resection of these lesions. From these reports, the laparoscopic approach appears to be a safe and reasonable option for therapy.
Figures:

Fig.1- The intussusception as seen laparoscopically *in vivo*.
Fig. 2- The exteriorized intussuscipiens.
Fig. 3- The pedunculated lipoma that initiated this intussusception. Note that this is a segmental resection. The bowel on either side appears viable.

References: