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An Unexpected Cause of Small Bowel Obstruction in an Elderly Gentleman



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Abstract

Introduction: When compared to children, intussusception is rare in adults. It comprises only 5% of all intussusceptions and represents only 1% of all bowel obstructions. It typically presents with nonspecific symptoms and clinical findings. Thus, it is important to maintain a broad differential in order to avoid delay in diagnosis and treatment.

Case presentation: We discuss the case of a 93-year-old male with surgical history of open appendectomy who presented to the emergency department with intermittent episodes of diffuse abdominal cramping. On physical exam, abdomen was slightly distended without tenderness or peritoneal signs. CT abdomen/pelvis demonstrated a partial small bowel obstruction caused by intussusception secondary to a submucosal lipoma. Exploratory laparotomy with an oncologic resection confirmed our diagnosis.

Discussion: Malignancy accounts for up to 30% of cases of intussusception occurring in the small intestine in adults. Other causes include polyps, Meckel's diverticulum, strictures, benign neoplasms, or iatrogenic. Its lack of pathognomonic presentation can complicate the diagnosis and lead to delay which may be catastrophic to the patient. Management is typically surgical however the question arises weather limited resection vs oncologic resection should be performed given the high likelihood for malignancy.

Introduction

When compared to children, intussusception is rare in adults. Only about 5% of all cases of intussusception occur in adults. Adult intussusception (AI) represents 1–5% of intestinal obstructions, making it rare [1]. The mean age in adults is 50 years of age with no gender predominance. Approximately 90% of the cases are secondary to a pathologic condition, only 8–20% of cases are idiopathic, without a lead point [2, 3]. Secondary AI is believed to initiate from any pathologic lesion of the bowel wall or irritant within the lumen that alters normal peristaltic activity and serves as a lead point, which initiates an invagination of one segment of the bowel into the other. It typically presents with nonspecific symptoms and clinical findings. Undiagnosed cases can result in great morbidity to the patient; therefore, diligent diagnosis and treatment is crucial. Management is typically surgical however the question arises weather limited resection vs oncologic resection should be performed given the high likelihood for malignancy.

Case Description

We present the case of a 93-year-old Caucasian male with past medical history of atrial fibrillation, hernia repair, appendectomy, and family history of pancreatic cancer, who presented to the emergency department with intermittent episodes of diffuse abdominal pain for approximately one month. Associated symptoms included intermittent nausea, vomiting, and diminished bowel function. Vital signs were within normal limits. On physical exam, abdomen was soft, mildly distended, non-tender, and without peritoneal signs. Laboratory findings included a leukocytosis of 13.5 K/ μ L, Blood urea nitrogen of 32 mg/dL, creatinine of 1.03 mg/dL, total bilirubin of 2.1 mg/dL with direct bilirubin of 0.4 mg/dL, and lactic acid of 1.6 mmol/L. Otherwise, all other labs were unremarkable. Abdominal CT scan with intravenous contrast demonstrated mildly dilated small bowel loops mostly in the left hemiabdomen with air-fluid levels. There was a transition point identified in the left mid abdomen and jejunal bowel loop, likely a submucosal lipoma measuring 4.2 x 3.9 cm causing small bowel intussusception. CT also demonstrated a complex cystic/low density mass in the pancreatic head with small calcifications and internal septations that could represent a serous adenoma and less likely a mucinous neoplasm. Further evaluation and diagnosis of this pancreatic mass was recommended, however given patient's age, patient and family did not want to pursue further intervention for this. Therefore, the decision was made to offer surgery for intussusception in the setting of an acute partial obstruction.

Patient underwent an exploratory laparotomy. A jejuno-jejunal intussusception was identified. Upon palpation, a pedunculated, soft, mobile mass was felt. There were no signs of bowel ischemia. An oncologic resection of the affected segment was performed. A primary anastomosis was completed, and the abdomen was closed. Histopathological examination showed 4.5 x 3.5 x 2.5 cm polypoid mass with unremarkable yellow adipose tissue. Patient had an uncomplicated post-operative course.

Imaging

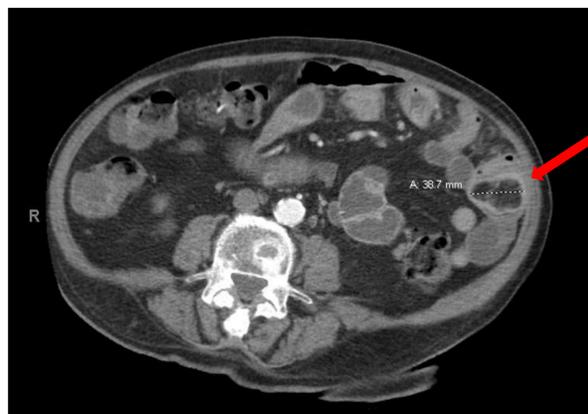


Figure 1



Figure 2

Photos

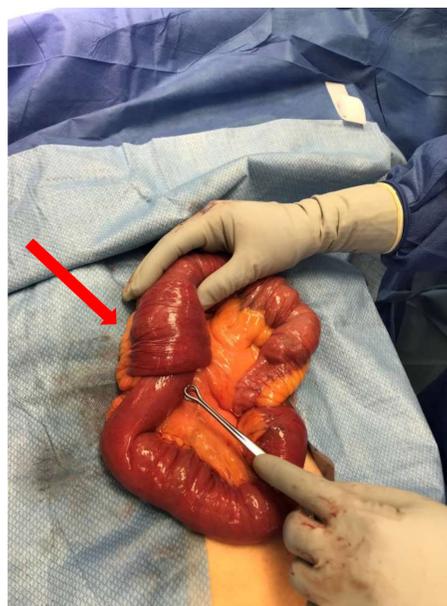


Figure 3

Figure 1. CT abdomen showing lipoma. **Figure 2.** CT abdomen showing “target sign”. **Figure 3.** Jejuno-jejunal intussusception intraoperatively

Discussion

Children with intussusception present with pathognomonic findings of cramping abdominal pain, currant jelly stools, and a palpable tender “sausage-like” mass on physical exam [4]. Conversely, adults present with vague obstructive like symptoms. Intermittent cramping abdominal pain, nausea, vomiting, and distention are commonly seen, however overall findings are nonspecific.

Causes of AI include carcinomas, polyps, Meckel's diverticulum, colonic diverticulum, strictures, benign neoplasms, iatrogenic causes (e.g. presence of an intestinal tube or gastrojejunostomy) and malignancy [6]. As high as 66% of large bowel cases are associated with malignancy whereas only 30% in small bowel cases. Regardless, high suspicion is crucial to prevent delay in diagnosis, which can lead to increase morbidity from either ischemia or malignancy.

Optimal treatment for AI is surgical, although the extent of the surgical resection remains questionable. Given the high incidence of underlying malignancy in colonic intussusception, appropriate oncologic resection is typically recommended [2, 5, 7].

With this said, preoperative or intraoperative reduction is debatable due to the theoretical risk of seeding and venous embolization, as well as perforation. On the other hand, a more selective approach has also been recommended considering the site of intussusception and the type of pathology [4]. This posed a difficult question in our case. We presented an older gentleman with a small bowel intussusception which has a lower risk for malignancy than colonic cases. Along with this, CT findings demonstrated a benign pathology, lipoma, as the cause of the obstruction. However, having a family hx of pancreatic cancer and findings of a pancreatic mass without proper investigation per the patient and family's wishes, we were left with the question of what the safest treatment option was. In order to prevent any possible seeding and need for further surgery if a malignancy was encountered, an oncologic resection was performed. Patient tolerated the procedure well and had an uncomplicated post-operative course.

In conclusion, Intussusception is a rare cause of intestinal obstruction in adults that often presents with non-specific symptoms and findings on physical exam. Majority of cases are caused by a secondary pathology, malignancy accounting for a large number of them. Treatment primarily involves surgery. There are no clear guidelines for oncologic vs limited resection, thus treatment is in general guided individually based on patient's history, anatomic location, and type of pathology. This case demonstrates the need for further studies to improve treatment guidelines.

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