

Fellows' Corner

A Case of Small Bowel Intussusception in an Adult

by Sonmoon Mohapatra, Devendra Enjamuri, Arkady Broder

CASE PRESENTATION

A 36-year-old male presented to the hospital with severe diffuse abdominal pain that was intermittent, with no significant aggravating or relieving factors. He also reported nausea and few episodes of non-bloody vomiting preceding the event. There was no weight loss, fever, chills, or constipation. There was no associated co-morbid conditions or previous history of abdominal surgery. Clinical examination showed normal vital signs. His abdomen was distended, and hyperactive bowel sounds were noted on auscultation. Investigations: complete blood count (CBC) and electrolytes were normal. Contrast-enhanced computed tomography (CT) scan and upper gastrointestinal series (UGI) with gastrografin of the abdomen is shown in Figure I. Follow up single balloon enteroscopy was performed (Figure II). He subsequently underwent surgery. The gross surgical specimen and histology is shown in Figure III and Figure IV respectively.

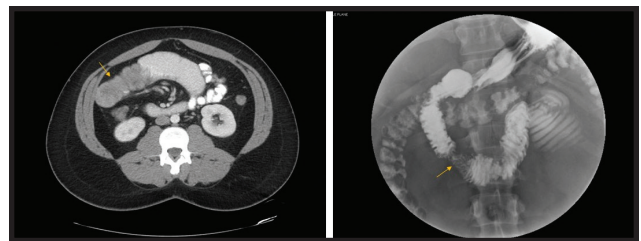


Figure I.

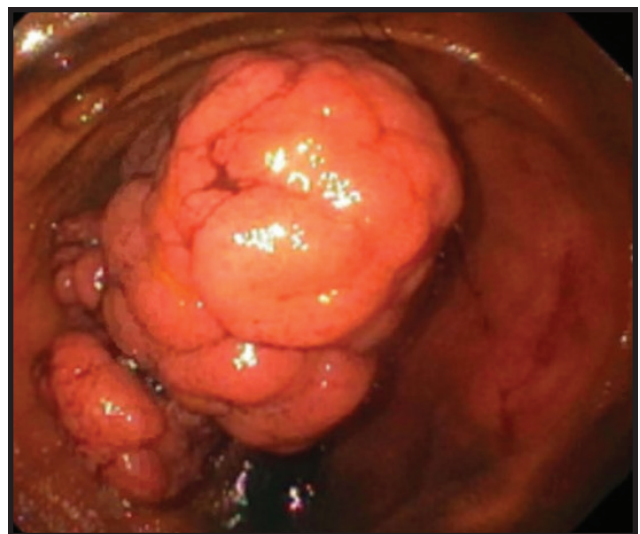


Figure II.

Questions

1. What is the radiological diagnosis?
2. a) What is the endoscopic diagnosis?
b) What does the histology show?
3. What is the most common cause of this finding in adults?
4. What are the non-obstructive causes of this disease?

Sonmoon Mohapatra, Devendra Enjamuri, Arkady Broder, Department of Gastroenterology and Hepatology, Saint Peter's University Hospital – Rutgers Robert Wood Johnson School of Medicine, New Brunswick, NJ

Discussion

1. This paper illustrates an unusual case of intussusception in an adult with the lead lesion being a hamartoma. Figure I shows a focal mass like a filling defect in the small bowel lumen (3.2 cm in maximal diameter) acting as a lead point of the intussusception. Adult intussusception represents 5% of all cases of intussusception and



Figure III.

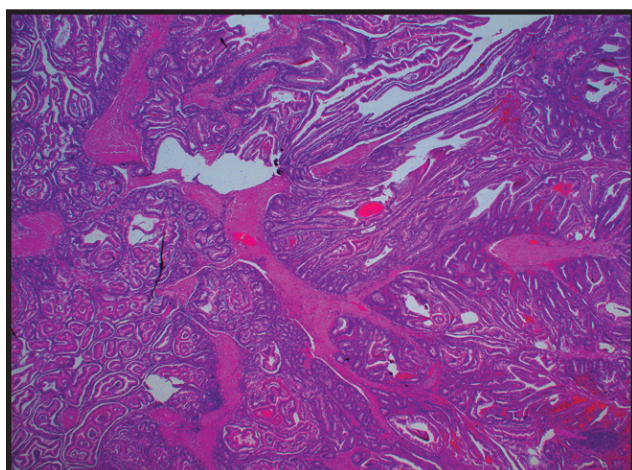


Figure IV.

only 1-5% presents with intestinal obstruction. Although the cause of intussusception in children is largely idiopathic, the majority of the adult cases is non-idiopathic and are associated with a pathological structural lead point. Adult intussusception is commonly diagnosed by CT scan.¹ Ultrasonography (USG) can be performed alternatively if the CT scan is unavailable. “Doughnut” or “pseudo kidney” signs may be present on the USG suggesting intussusception.¹ The “target sign” and “crescent sign” are some other specific abdominal radiographic findings.

2. a) Single balloon enteroscopy showed a large polypoid mass in the mid-jejunum [Figure II]. The patient underwent segmental small bowel resection

(jejunal) including a regional lymph node removal [Figure III].

3. b) Pathology showed a central core of smooth muscle extending into the polyp in an arborizing fashion, which was covered by normal small bowel mucosa suggesting Peutz-Jeghers polyp [Figure IV].
4. The most common causes of small bowel intussusception in adults include malignancies (commonly metastatic), benign tumors (such as adenomatous polyps, fibromas, lipomas, hamartomas, leiomyomas), adhesions and lymphoid hyperplasia.²
5. Non-obstructive diseases such as cystic fibrosis, scleroderma, celiac disease, inflammatory bowel disease, appendicitis, pancreatitis and rectal foreign bodies may also cause intussusception in adults.² A hamartomatous polyp is diagnosed as a solitary Peutz-Jeghers polyp (PJP) when it does not meet the WHO criteria of Peutz-Jeghers syndrome (PJS). PJS is a rare clinical entity characterized by distinct mucocutaneous pigmentation and intestinal hamartomatous polyps. PJS is commonly seen in the 2nd and 3rd decade whereas solitary PJP is diagnosed often in the 4th decade.³ A mutation of the LKB1/STK11 gene is found in 50-94% of the patients with PJS. There is an increased risk of gastrointestinal malignancies in patients with PJS. An increased prevalence of malignancies has been shown in PJS with a relative risk for gastrointestinal cancer of 13 (95% confidence interval, 2.7–38.1) and non-gastrointestinal cancer of 9 (95% confidence interval, 4.2–17.3).⁴ No optimal screening strategy has yet been described. Some proposed screening strategies include upper gastrointestinal endoscopy every 2 years beginning at age 10, colonoscopy every 3 years starting at age 25, and small-bowel screening starting at age 10.⁴ ■

References

1. Marinis A, Yiallourou A, Samanides L, et al. Intussusception of the bowel in adults: a review. *World J Gastroenterol* 2009;15:407-11.
2. Lu T, Chng YM. Adult intussusception. *Perm J* 2015;19:79-81.
3. Zbuk KM, Eng C. Hamartomatous polyposis syndromes. *Nat Clin Pract Gastroenterol Hepatol* 2007;4:492-502.
4. Cortes C, Saenz R, Silva C. Unusual cause of abdominal pain: Peutz-Jeghers syndrome. *Clin Gastroenterol Hepatol* 2007;5:A24.