



ORIGINAL RESEARCH PAPER

General Surgery

A RARE CASE REPORT ON ADULT INTUSSUSCEPTION CAUSED BY LEIOMYOMA OF ILEUM

KEY WORDS:

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ABSTRACT

Intussusception is a rare condition in adulthood and, unlike in children, is usually caused by an identifiable underlying lesion, most commonly a gastrointestinal tumor. The clinical presentation is non-specific and often there are intermittent symptoms making the diagnosis difficult based solely on history and examination. Plain radiography may reveal signs of bowel obstruction; however, CT is the gold standard to diagnose and localize an intussusception in adults. We present an unusual case of adult ileo-ileal intussusception caused by an ileal leiomyoma. This case highlights the important radiological endings of intussusception presenting with a high-grade obstruction and discusses the potential causes which should be considered.

INTRODUCTION:

Leiomyoma of the small intestine are uncommon entities, due to their frequency and varying characteristics majority of them warrant for publishing so that a general idea can be ascertained from the literature provided. Intussusception in adults is rare, accounts for less than 5% of bowel obstructions.

CASE REPORT:

A case of 65-year-old female presented with complaints of abdominal pain for 4 days which increased in severity in the past few hours, the pain was associated with vomiting for 2 days without any significant past history, on physical examination abdomen was lax, tenderness present over hypogastrium, no guarding or mass palpable, on auscultation bowel sound was hyperactive, the digital rectal examination was collapsed and empty. She was hemodynamically stable.

CT Abdomen was taken which suggested ileo-ileal intussusception, hence the patient was taken into an operative room for emergency laparotomy, intraoperatively we found ileo-ileal intussusception with lead point of 3x2cm firm mass lesion without any peritoneal deposits, solid organ involvement, ascites, so resection and anastomosis with surgical clearance of 5cm margin on both sides were opted and performed, post-operative period uneventful.

Histopathology was reported as a 3x2x2cm hyalinized nodule with irregular, dystrophic calcification. Spindle cells focally involved the outer aspects and these stained with actin and desmin, confirming the lesion to be a submucosal leiomyoma.

DISCUSSION:

Intussusception in adults is rare, accounting for less than 5% of bowel obstructions, but can be an often missed surgical emergency and indicator of underlying pathology. Adults tend to present with intermittent or vague abdominal pain over a period of time without any distinct clinical signs on examination to differentiate it from other causes of obstruction. The diagnosis is made through either radiological finding, laparoscopic examination, or intraoperatively during the laparotomy. An underlying cause of intussusception is found in more than 90% of cases; because of this, radiological investigation and surgical intervention are almost always indicated in adults.

Plain abdominal radiographs can reveal distended loops of bowel and air-fluid levels, which are typical of bowel obstruction; but are generally unable to discern the cause of the blockage. On ultrasonography, the characteristic findings are a "target sign when viewing the bowel in a transverse

plane and "pseudokidney" sign when viewing it in the longitudinal plane. Ultrasound is a reliable diagnostic tool, especially in children, with the added benefit of being radiation-free.

CT is generally accepted as the most sensitive and specific radiological investigation for intussusception and is the modality of choice in adults. It is also frequently used as an investigative tool for undifferentiated abdominal pain which is often how intussusception presents. Like ultrasound, the exact appearance is dependent on the plane the images are taken. A bowel-within-bowel configuration forming a series of concentric rings, much like the target sign, is typical when the CT image is perpendicular to the bowel.

In a longitudinal axis, the image is akin to a sausage. A CT scan of the abdomen and pelvis also provides the radiologist with significant amounts of other important information. The location and extent of the intussusception can be characterized, along with the presence of any ischemia or perforation, greatly aiding initial management and surgical planning. The lead point, if present, can usually be identified suggesting the nature of the underlying cause. Finally, in the event malignancy is suspected, an assessment for locoregional metastases can be performed.

An underlying pathological cause for intussusception can be identified in more than 90% of adults. The most common cause is a neoplastic process, either benign or malignant, but rarer causes include Meckel's diverticula, strictures, adhesions, and a single case report of a gallstone causing secondary intussusception. The location of the intussusception may suggest the nature of the tumor; with those occurring in the colon most often being malignant and those in the small bowel predominantly benign. Leiomyomas are the most common benign tumor of the small bowel. Other benign tumors which could act as a lead point in intussusception include inflammatory fibroid polyps and gastrointestinal stromal tumors. A search of the English-language literature found six previously reported cases of a leiomyoma causing intussusception with five of them being jejuno-jejunal and one being duodenojejunal.

All were diagnosed on CT with a visible lead point while plain radiography, ultrasound, and endoscopy served as adjuncts. Leiomyomas were subsequently confirmed on histopathology. Neoplasia should always be suspected in adult intussusception and radiological assessment should be undertaken for metastatic disease, especially in a colo-colic intussusception.



Image 1: resected specimen with the leiomyoma.

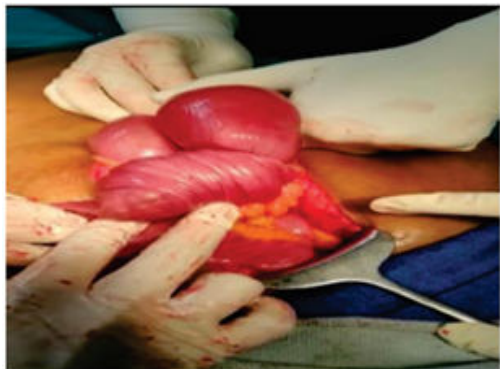


Image 2: intraoperative finding: ileo-ileal intussusception

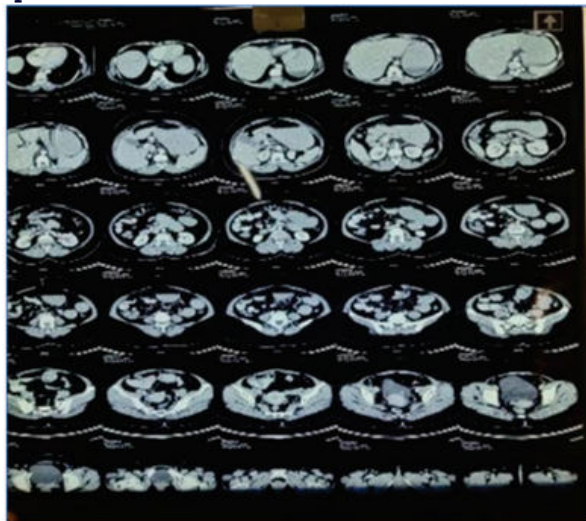


Image 3: CT imaging showing intussusception