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ILEOCAECAL INTUSSUSCEPTION FROM AN INFLAMMATORY FIBROID POLYP: CASE REPORT

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ABSTRACT

Adult intussusceptions are rare entities that are predominantly associated with a demonstrable lead point. A 27 year old man presented with of worsening right iliac fossa pain associated with vomiting. On clinical examination, patient appeared well and apyrexial, abdomen was soft with localized right iliac fossa tenderness. Plain abdominal radiograph did not reveal any diagnostic features. A diagnosis of acute appendicitis was entertained, and underwent diagnostic laparoscopy however; intraoperatively the terminal ileum was seen to invaginate the ascending colon till the transverse colon. A decision for conversion to laparotomy was made and manual reduction of the intussusception was performed A correct and timely diagnosis is not only necessary to avoid the complications of bowel infarction and perforation secondary to high-grade obstruction but also to resect the underlying lesion that serves as a lead point.

KEYWORDS: Intussusception, Inflammatory, Fibroid Polyp.

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1. INTRODUCTION

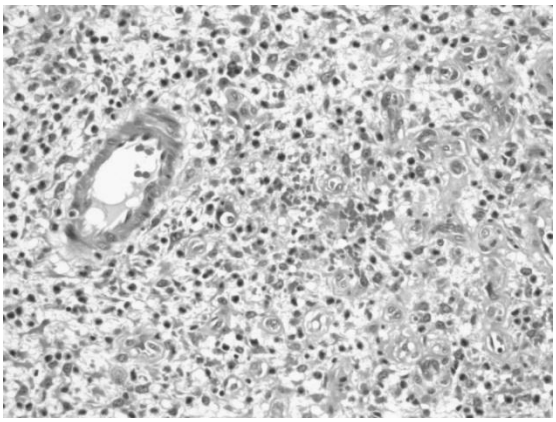
Intussusception is known as the progressive invagination of a segment of bowel. Intussusception is the commonest cause of acute abdomen in the pediatric age group between three months to three years.[1] However, adult intussusception is a different entity and represents 1% of all bowel obstructions, 5% of all intussusceptions, and 0.003%-0.02% of all hospital admissions.[2] Intussusceptions is classified on basis of its location. The most common classification system divides intussusceptions into four categories: enteric, ileocolic, ileocecal, and colonic.[3] The mean age at presentation tends to be later in life, predominantly in the 6th decade. It may be acute or chronic (persistent or intermittent) in addition to being 'silent'.[4] It is well documented that 80-90% of all adult intussusception have an underlying cause, with approximate 65% of causes related to neoplasm.[5,6] Inflammatory fibroid polyps may commonly present as enteric intussusceptions in adults. This diagnosis should, therefore, be borne in mind when intussusceptions are encountered in adult patients. They can be treated adequately by resection of the involved bowel segments with macroscopically clear margins. The current case report outlines a common presentation of these lesions.

2. CASE REPORT

A 27 year old man presented with worsening right iliac fossa pain associated with vomiting was presented at Hospital. While recording patient medical history, patient revealed that he has experienced intermittent milder pain for the past month and did not seek medical attention as the pain subsided spontaneously. There was no history of prior abdominal operations.

On clinical examination, patient appeared well and apyrexial, abdomen was soft with localized right iliac fossa tenderness. Plain abdominal radiograph was immediately done however that did not reveal any diagnostic features. Laboratory investigations included a complete blood count, and his total white cell count was found to be raised.

A diagnosis of acute appendicitis was entertained, and underwent diagnostic laparoscopy. However, intraoperatively the terminal ileum was seen to invaginate the ascending colon till the transverse colon. A decision for conversion to laparotomy was made and manual reduction of the intussusception was performed.



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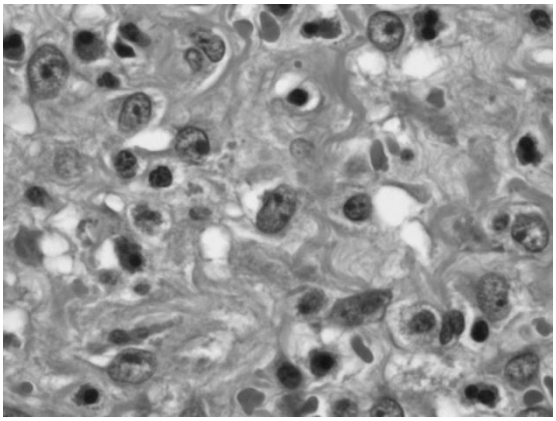

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Fig. 1: Microscopic examination shows exuberant vascularization A. Inflammatory fibroid polyp with myofibroblasts, eosinophils and sclerotic background B. High-power detail showing myofibroblast and eosinophil.

A tumor measuring 2 x 3 cm was noted in the ileum about 25 cm from the ileocaecal junction and the segment of ileum was resected, end-to-end anastomosis was performed. The patient histopathology report revealed an inflammatory fibroid polyp (Fig1). On follow-up, patient was recovering uneventfully after surgery and then he was discharged.

3. DISCUSSION

Intussusception is a continuous process primarily due to abnormal peristalsis, producing unequal longitudinal forces in the intestinal wall. The bowel wall invaginates into the lumen and propelles onwards. Pressure builds up in the wall, impeding first the venous followed by the arterial supply eventually causing ischemia. Hence, early diagnosis is essential to prevent onset of infarction and perforation.

Inflammatory fibroid polyps can be found anywhere within the gastrointestinal tract, but they are generally most prominent within the gastric antrum and distal ileum.

IFPs have been reported to occur across a wide age range, but are most commonly identified in the sixth decade of life. This is likely because the lesions produce local symptoms that are size dependent.

The majority of cases are sporadic, although there have been reported cases of IFP occurring in familial clusters as polyposis syndromes. Moreover, an association is also reported between IFPs and coexistent gastric neoplasms. (4 carcinomas and 2 adenomas).[6]

Macroscopically, IFPs tend to appear as solitary sessile polyps that are well circumscribed. Larger lesions may become pedunculated, and the overlying mucosa may be ulcerated. The polyps are usually confined to the submucosa, but may extend into the mucosa, or into the muscularis propria and serosa. The classic microscopic features include proliferation of fibroblasts within loose, oedematous connective tissue stroma, accompanied by infiltrates of eosinophils, plasma cells, lymphocytes, macrophages and mast cells. Several variably sized blood vessels are usually present within the stroma, and larger vessels are often surrounded by a distinct zone of loose connective tissue.

The gastrointestinal stromal tumor (GIST) is an important consideration in the histological differential diagnosis of IFPs, and in morphologically ambiguous cases, immunohistochemistry is used to make a distinction between the two. Both tumors' are positive for CD34 and vimentin, but GISTs are positive for CD117 (*c-kit*), while IFPs are not.[6]

IFPs have no metastatic potential. They remain dormant until they are large enough to produce local symptoms that are dependent on their location. Small bowel lesions are usually undiagnosed pre-operatively because they present with vague symptoms of bowel obstruction due to intussusception. Laboratory investigations and plain radiographs are not helpful in making the diagnosis as they will demonstrate non-specific findings that are more in keeping with bowel obstruction.

The current trends of liberal diagnostic imaging have increased the pre-operative detection of adult intussusceptions. The "target" or "sausage" sign has been described on ultrasound and computed tomography (CT) scans, representing the central intussusceptum surrounded by

concentric layers formed by the thickened oedematous intussuscepiens.[7] Collective analysis of three retrospective studies that examined CT findings in over 70 patients with surgically confirmed intussusceptions report that abdomino-pelvic CT has 78% sensitivity and 100% specificity to diagnose intussusceptions pre-operatively. Recent developments in MRI with ultra fast multiplanar techniques now allow for rapid evaluation of bowel obstruction. The multiplanar HASTE (half-fourier single shot turbo spin echo) is particularly useful in the diagnosis of intussusception, since this sequence is motion insensitive. The high contrast resolution between the increased signal of the trapped intraluminal fluid and the intermediate to low signal of the bowel wall can clearly demonstrate the pathology. There are no unique identifying features on imaging that can distinguish the nature of the lead points. The absence of pathognomonic clinical or radiological features makes operative resection and microscopic assessment mandatory.

Operative resection of the involved intestine with macroscopically clear margins is sufficient treatment for IFPs. It is important to ascertain uninvolved resection margins to ensure complete excision of the affected bowel segments. Inadequate resection margins may involve bowel and predispose to disease recurrence. To date, there have been two reported cases in the literature where IFPs recurred after presumably incomplete resection. However, a reduction attempt in adult intussusception by either a radiologic or manual approach during operation is still a controversial issue. In a retrospective study from a single center, 46% of the leading points of the intussusception contained malignant lesions. Therefore, a routine trial of reduction is not recommended due to the risk of spreading or seeding malignant cells, potential perforation of the intussuscepted bowel, and venous embolization at the ulcerated mucosa area.[8] There is also the issue of most surgeons' lack of experience in manual reduction given the rarity of this event. Emergency surgery with primary resection without prior reduction remains the mainstay of treatment for adult intussusception.

4. CONCLUSION

Adult intussusception remains a rare cause of persistent or intermittent chronic abdominal pain. It is interesting to note that most cases of adult intussusception have an identifiable pathologic change at the leading point, either an adhesion, a malignant lesion, or a benign lesion. A correct and timely diagnosis is not only necessary to avoid the complications of bowel infarction and perforation secondary to high-grade obstruction but also to resect the underlying lesion that serves as a lead point.

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