

An Unusual Cause of Intestinal Intussusception in an Old Patient: Inflammatory Fibroid Polyp

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Abstract

Background: Inflammatory Fibroid Polyp (IFP) is a rare and uncommon benign lesion that originates in the submucosa of the gastrointestinal tract. Its clinical symptoms are heterogenous and depend on the location and size of the tumor. Inflammatory fibroid polyps are one of the rare benign conditions leading to intestinal intussusception in adults.

Case presentation: A 76-year-old woman presented to the emergency department with acute abdominal pain, vomiting, nausea and failure in defecation and gas passing. Physical examination revealed abdominal distension. Abdominal X-ray showed dilated small bowel segments with air-fluid levels. Operative finding was an ileo-ileal intussusception due to a mass lesion at 40 cm proximal to the cecum. Intussusception was spontaneously reduced during exploration and a wedge resection was performed for the affected bowel segment. Histopathologic examination showed the mass to be an inflammatory fibroid polyp. About 4 days after the operation, the patient was discharged from the hospital and there was no particular problem during the 6 month follow up.

Conclusion: Although IFP is an extremely rare cause of small intestine obstruction, it should be taken into consideration in patients with obstruction.

Keywords: Inflammatory fibroid polyp, Intestinal intussusception

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Received: 20 Nov 2019

Accepted: 20 Dec 2019

Citation to this article:

Mohammadi Tofighi A, Zebarjadi Bagherpour J, Samsami M, Nematihonar B. An Unusual Cause of Intestinal Intussusception in an Old Patient: Inflammatory Fibroid Polyp. *J Iran Med Counc.* 2020;3(1):55-58.

Introduction

Intussusception of the bowel is one of the most common abdominal emergencies affecting those under two years of age and compared to children is an uncommon cause of intestinal obstruction in adults. In this paper, a case of an adult with Inflammatory Fibroid Polyp (IFP) confined to the terminal ileum is reported who presented with acute symptoms. The aim of this study was to emphasize that some very rare etiologies may be involved in adult intestinal obstructions.

Presentation

A 76-year-old woman presented to the emergency department with acute abdominal pain, nausea and vomiting and a two day history of failure in defecation and gas passing and there was no history of previous abdominal surgery or other medical history. On physical examination, she had a heart rate of 100 beats per minute, blood pressure of 130/60 *mmHg*, and a temperature of 37.8°C. Generalized abdominal pain was found on abdominal examination without signs

of peritoneal irritation. Bowel sounds were absent. Laboratory analysis revealed 15,000 leukocytes with prevalence of neutrophils. Other parameters were within the normal limits. Abdominal radiology demonstrated a few air-fluid levels (Figure 1). An exploratory laparotomy was performed with the diagnosis of acute intestinal obstruction. An intussusception with a mass lesion at its lead point approximately 40 *cm* proximal to the caecum was found (Figure 2). Intussusception was spontaneously reduced during exploration. Limited edema at the lead point of the bowel was the only sign of the intussusception. A wedge resection was performed to the affected bowel segment. After the surgery, the patient was transferred to the ward, and 2 days later, the fluid regimen and subsequently the regular regimen for the patient were started and the patient tolerated it. About 4 days after the surgery, the patient was discharged from the hospital. Histopathologic examination showed the mass to be an inflammatory fibroid polyp (Figures 3-5). And there was no particular problem during the 6 month follow up.



Figure 1. Abdominal x-rays showed intestinal obstruction, suggestive finding

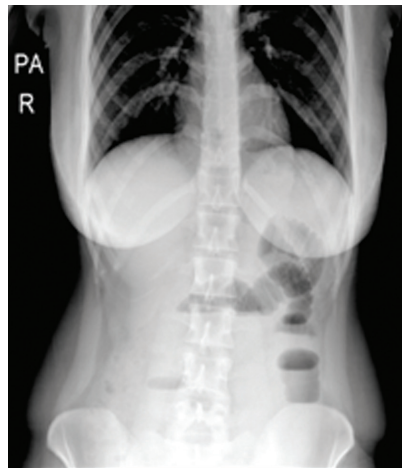


Figure 2. Operative finding

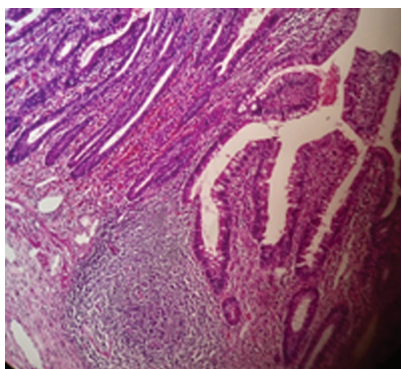


Figure 3. Proliferation of stromal cell

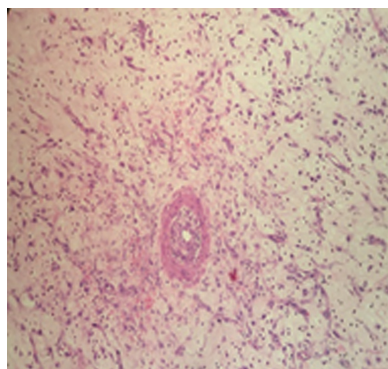


Figure 4. Onion skin vessel

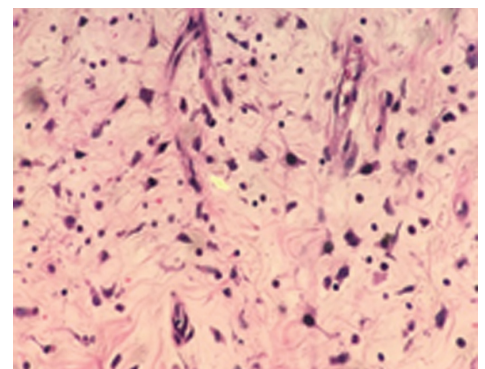


Figure 5. Inflammatory infiltrated eosinophils

Discussion

IFP was first described by Vane in 1949 as an eosinophilic submucosal granuloma (1). The term inflammatory fibroid polyp was later introduced by Akbulut S (2). IFP is an extremely rare neoplasm. These tumors can be found throughout the gastrointestinal tract, but the most common site is the gastric antrum, followed by the small bowel, colorectal region, gallbladder, esophagus, duodenum, and appendix (3). Clinical symptoms tend to be heterogeneous and essentially depend on tumor location and its size and the most frequent symptoms are abdominal pain, bleeding, and anemia and more rarely, intestinal obstruction due to intestinal intussusception (4). They can affect any age group, but peak incidence is between the sixth and seventh decades, and there is a slight predominance in men (1). Several differential diagnoses have to be considered. The most common benign lesions are adenomatous polyps, which are usually small. The presence of fat within the lesion characterizes intestinal lipomas at CT and Magnetic Resonance Imaging (MRI). Lymphomas account for 20 to 40% of malignant small bowel lesions typically seen as a voluminous endoluminal tumor. GISTs have a similar appearance to IFPs but generally show partial extraluminal growth with irregular margins and a heterogeneous appearance (5). IFPs appear either sessile or pedunculated on endoscopic examination, and may present superficial erosion/ulceration (6). Wille and Borchard (7) have described the histologic features of IFPs, which present submucosal proliferations of spindle cells, often

arranged in an onion-like pattern not only around blood vessels but sometimes also around mucosal glands. Besides proliferation of numerous capillary vessels of varying size, there were always irregularly shaped blood vessels which were often ectatic with varying thickness of the muscular walls. Overall, there was an inflammatory reaction of varying degrees, dominated by eosinophils and macrophages. On immunohistochemistry, these tumors show positive staining with CD34 and vimentin and variable staining with smooth muscle actin. They are negative for CD 117, S100, and ALK 1. IFPs should be differentiated from other spindle cell tumors of the gastrointestinal tract, which include GISTs, schwannomas, and Inflammatory Myofibroblastic Tumors (IMTs) (7). The radiological appearance of IFPs is not specific and is scarcely reported in literature. An IFP is often described at imaging exam as an intestinal tumor growing in the lumen of the digestive tract. Balci *et al* (8) have reported the MRI appearance on a T2-weighted HASTE sequence. Intussusception refers to the insertion of an intestinal tube into the contiguous lumen, usually leading to intestinal obstruction and ischemia (9). Intussusception in adults accounts for 1-3% of intestinal obstruction (10). The etiology of more than 90% of intussusception in adults has been reported (11). However, the preoperative diagnosis of intussusception still remains difficult. Abdominal CT is usually used in the preoperative evaluation. Surgery is the recommended treatment. Seventy to ninety percent of all intussusceptions happen as a result of a malignant or benign tumor.

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