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Surgical versus conservative management of adult intussusception: Case series and review

Nail Aydin, Andrew Roth, Subhasis Misra *

Department of Surgery, Texas Tech University Health Sciences Center, 1400 South Coulter Street, Amarillo, TX 79106-1786, USA

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ABSTRACT

INTRODUCTION: Intussusception is the telescoping of a segment of bowel into its adjacent segment. It is a known cause of abdominal pain in the pediatric population, however, it is rare in the adult. Adults do not always present with the typical symptoms seen in young children, making the clinical diagnosis more difficult. The etiology of adult intussusception can be idiopathic, benign, or malignant. Diagnosis is most accurately made with computed tomography, which is sensitive in detecting intussusception as well as potential lead points.

PRESENTATION OF CASES: This study presents four adult patients with intussusception. The first three patients are adults with idiopathic intussusception and no evidence of a lead point. The fourth case involves intussusception secondary to a jejunal carcinoid tumor which was treated surgically. Each case has unique features in terms of length and number of intussusceptions, duration of symptoms, and recurrence.

DISCUSSION: Surgical treatment was once argued to be universally appropriate for adult intussusceptions; however, with increased use of advanced imaging, newer literature is demonstrating that this is not true in all cases. Idiopathic intussusception presents with nonspecific symptoms and can be managed with supportive care when the history and clinical picture indicate low probability of a neoplasm.

CONCLUSION: This study aims to raise awareness to the potential diagnosis and management of intussusceptions, particularly the symptomatic idiopathic type in the young adult.

1. Introduction

Intussusception is the telescoping of a segment of bowel into its adjacent segment. It is a known cause of abdominal pain in the pediatric population, however, it is rare in the adult. Unlike the classical signs and symptoms of intussusception seen in the pediatric population, such as short lived recurrent episodes of colicky abdominal pain, lethargy, fever, and currant jelly like stools, adult patients with intussusception usually present with atypical signs and symptoms [1,2]. Due to this fact, the clinical diagnosis can be challenging in adults. The etiology of adult intussusception can be due to idiopathic, benign, or malignant processes [3]. There are many publications in the literature about intestinal intussusceptions of various identifiable etiologies, however, there are only a few publications commenting on idiopathic intestinal intussusceptions. In this paper, four cases of entero-enteric intussusceptions are presented, with three of them idiopathic in etiology and one associated with a jejunal carcinoid tumor. While surgical treatment was once argued to be universally appropriate for adult intussusceptions, recent literature suggests that a more selective approach is warranted. Our aim is to raise awareness to the potential diagnosis and management of intussusceptions, particularly the symptomatic idiopathic type in the young adult.

2. Presentation of case #1

A 20-year-old man presented to the emergency department (ED) after a motor vehicle accident with soft tissue contusions, several abrasions, and abdominal pain. The abdominal pain, however, was not associated with the trauma, as he developed a colicky abdominal pain two days prior to his presentation. During this time he also complained of loss of appetite, diarrhea, and one episode of nausea and vomiting. His vital signs were within normal physiological range. His physical exam revealed a soft, non-tender, and non-distended abdomen, a normal rectal exam, and no signs of obstruction or peritonitis. CT scan of his abdomen and pelvis with and without IV contrast revealed a 3 cm long intussusception of the small bowel without obstruction (Fig. 1). CBC, CMP, and urine analysis were all within normal limits. The patient was admitted for clinical follow up with a conservative approach. Serial abdominal examinations were performed. Further radiographic testing with

* Corresponding author.
E-mail addresses: nail.aydin@ttuhsc.edu (N. Aydin), andrew.roth@ttuhsc.edu (A. Roth), subhasis.misra@ttuhsc.edu, drsubu@yahoo.com (S. Misra).

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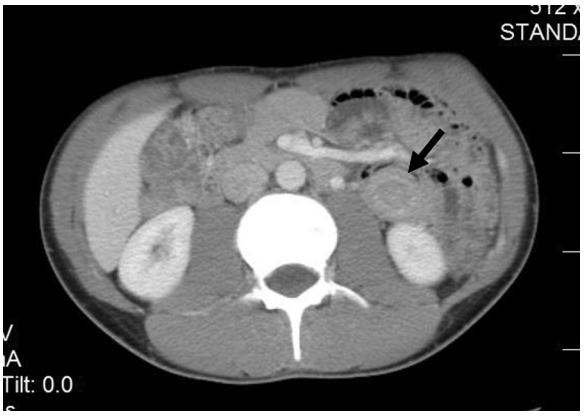

Fig. 1. Computed tomography (CT) of the abdomen and pelvis with IV contrast showing a small bowel intussusception in the left mid abdomen, extending over a vertical height of about 3 cm. Note the appearance of a "target sign".

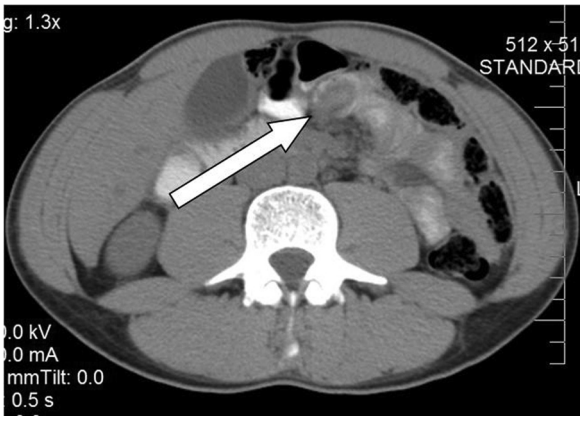

Fig. 2. CT Abdomen/Pelvis with oral contrast.

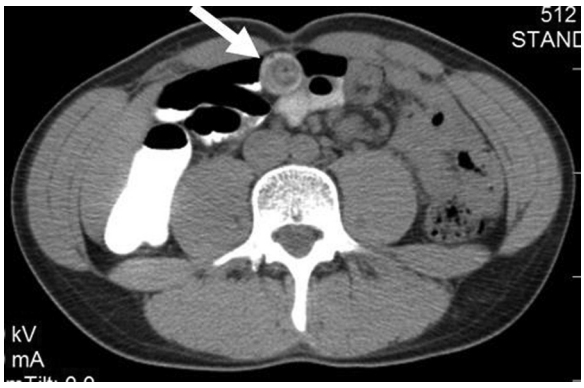

Fig. 3. CT Abdomen/Pelvis without contrast. Note the intussusception in the anterior abdomen at the level of the umbilicus.

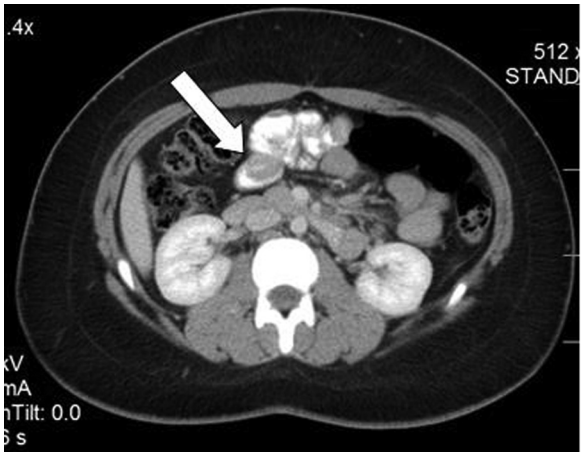

Fig. 4. CT Abdomen/Pelvis with IV and oral contrast.

a small bowel series was undertaken to restudy the intussusception which showed resolution and no other pathology. Based on the clinical picture and radiographic findings, a diet was started and advanced as tolerated. He was discharged later that day. At the time of writing, the patient is without any signs or symptoms of recurrence.

3. Presentation of case #2

An 18-year-old man presented to the ED complaining of left upper quadrant abdominal pain. Physical exam, labs, and CT of the abdomen and pelvis were normal. Without any concerning findings, the patient was discharged. Three days later, the patient returned to the emergency department, describing intermittent left upper quadrant abdominal pain without any episodes of nausea, vomiting, fevers, chills, hematochezia, melena, diarrhea, or constipation. Vital signs were all within normal limits. His abdomen was soft and non-distended, however the left upper quadrant was tender to touch without peritoneal signs. His labs were within normal limits. The CT of the abdomen and pelvis revealed a jejuno-jejunal intussusception with a length of 2.9 cm in the left upper quadrant (Fig. 2). No bowel obstruction was found. The patient was admitted for observation with serial abdominal exams and conservative management. Resolution of the jejuno-jejunal intussusception was documented on repeat CT. His symptoms improved clinically and his exam findings and vital signs remained normal. He was subsequently discharged.

Three months later, the patient again presented to the ED with a half-day history of vague abdominal pain localized to the umbilicus and associated nausea. According to the patient, the pain was similar to the pain from his previous presentation. Vital signs were all within normal limits. The abdominal exam was benign, without peritoneal signs. CT of the abdomen and pelvis revealed an intussusception, but this time at the level the umbilicus in the anterior abdomen, again without associated obstruction (Fig. 3). Labs revealed no abnormalities. The patient was admitted for observation with conservative management. Repeat CT of the abdomen and pelvis showed persistence of the intussusception, with a measured length of about 1.5 cm. A second focus of intussusceptions was also found inferior to the formerly described intussusception and slightly to the left of midline, which was measured to be about 2.2 cm without obstruction. He reported his pain to be less severe. Physical exam, vitals, and labs were normal. Subsequent small bowel follow-through studies revealed resolution of the intussusceptions. The patient's clinical status continued to improve, so he was discharged. He has had no recurrences to this date.

4. Presentation of case #3

A 19-year-old woman presented to the ED with pain localized to the mid/right upper abdomen, nausea, and a low grade temperature for approximately 2 weeks. The abdomen was found to be soft, non-distended, and tender in the right upper quadrant without peritoneal signs. All vital signs and labs were normal. CT of the abdomen and pelvis with IV and oral contrast revealed an intussusception with a length of 2.7 cm in the right upper quadrant without any signs of obstruction (Fig. 4). She was kept overnight and followed with conservative management. A repeat CT of the