

CASE REPORT

Jejunal Intussusception as an Unusual Cause of Abdominal Pain in an Adult

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INTRODUCTION

Intussusception is a relatively common etiology of abdominal pain in pediatric population and is usually idiopathic. In adults, on the other hand, this entity is seen infrequently and a lead point can be recognized in a vast majority of cases. This is a description of a case of a young male who presented to our hospital with abdominal pain and was diagnosed with jejunal intussusception without any obvious underlying cause.

CASE

A 29 year-old white male with past medical history significant for hepatitis C, factor V leiden deficiency, femoral-popliteal bypass surgeries twice for arterial clots, and anxiety disorder presented to the emergency department with a chief complaint of peri-umbilical abdominal pain. He described the pain as moderately severe and colicky in nature, intermittent, radiating from right upper quadrant to the left. The pain started a week prior, preceded by nausea, vomiting and diarrhea, and had been progressively getting worse. He had two to three episodes of vomiting and liquidy diarrhea per day. He did not notice any blood in his vomit or stools, and there was no association of the pain with food intake.

On review of systems, he denied any fevers, chills, weight loss, burning micturation, flank pain, recent camping or travel, or any sick contacts. He mentioned taking amoxicillin for three days after a dental procedure two weeks prior to the presentation. Further review of system was otherwise negative.

He was an active smoker with more than ten pack-year smoking history, and admitted to using intravenous drugs in the remote past. He consumed beer on weekends, and smoked marijuana occasionally. His home medications included duloxetine, diazepam and warfarin (which he stopped taking after the dental procedure). His family history was not contributory.

Physical examination demonstrated a tall, well built male. Vital signs were stable with mild tachycardia (HR 100) but no fever. He was anicteric, in mild distress

secondary to pain. There was moderate tenderness in the peri-umbilical region with no rebound tenderness or guarding. Murphy's sign was negative, and there was no costovertebral tenderness. Bowel sounds were somewhat hyperactive. No organomegaly or lymphadenopathy could be appreciated. There were no noticeable dermatological changes other than old tattoo marks on both arms. Rectal stool examination was guaiac negative. The rest of the examination was within normal limits.

Laboratory investigation revealed white cell count of 7.4 (4.5-11.0) Thou/u, hemoglobin of 16.2 (12.0-16.0) g/dL, platelets of 143 (150-450) Thou/u, sodium 137 (136-147) mmol/L, potassium 4.1 (3.5-5.0) mmol/L, chloride 101 (98-108) mmol/L, bicarbonate 28 (23-32) mmol/L, BUN 19 (9-22) mg/dL, and serum creatinine 0.9 (0.6-1.2) mg/dL. His lipase was 26, serum albumin 4.2 (3.0-5.0)g/dL, total bilirubin 1.2(0.3-1.1) mg/dL, alkaline phosphatase 46 U/L (42-157), AST 73 U/L (14-48), ALT 117 U/L (7-58). Urine drug screen tested positive for cannabinoids, otherwise urinalysis was within normal limit.

A computed tomography (CT) scan of abdomen was performed which revealed several loops of jejunum with apparent wall thickening and "targetoid" appearance with short segment intussusceptions. There was no evidence for retroperitoneal adenopathy or hematoma, and no pelvic mass or free fluid was noticed. The radiological appearance was consistent with jejunal intussusceptions of unidentified cause. (Please refer to figures 1 and 2 for CT scan images.)

He was initially managed symptomatically with intravenous normal saline fluids, NPO status and pain management. Overnight, he had minimal improvement in his symptoms and continued to have intermittent diarrhea. He subsequently underwent a radiocontrast small bowel follow-through examination after which his symptoms improved spontaneously. The study demonstrated moderate dilatation of loops of the mid jejunum in the right upper quadrant which was of uncertain etiology. There was no evidence of narrowing,

obstruction, intraluminal filling defect, inflammatory bowel disease or intussusception at that time.

His stools tested negative for leucocytes and no *C difficile* toxin was identified. There were no ova or parasites in stools, and the cultures grew heavy growth normal fecal flora, without any salmonella or shigella. The hepatitis panel was negative for A and B, but positive for C, consistent with his history of Hepatitis C. Additionally, the HIV test was negative.

As his symptoms had improved noticeably, he was therefore discharged home with an advice to follow-up as an out-patient with his primary care physician. The final diagnosis was 'idiopathic jejunal intussusception'.

DISCUSSION

Intussusception is the telescoping of proximal portion of bowel (called as intussusceptum) into an adjacent distal bowel (called as intussuscipiens). It is an infrequent cause of abdominal pain in adults. As opposed to that in children, most of the cases (about 90%) in adults have an identifiable cause while the rest are idiopathic. The lead point of intussusception is usually in the small intestine (enteroenteric) ranging from about 77 – 88%, in colon (colocolic) in 6-15% and ileocecal in about 5-7% and gastroenteric in about 2% of the cases (1, 2).

In a study of 58 cases of surgically proven adult intussusceptions, most patients were found to have presented with signs and symptoms suggestive of bowel

obstruction (13). However it may present in a variety of spectrum ranging from acute to chronic symptoms such as abdominal pain, nausea and vomiting in about 80%, malena or guaiac positive stools in 29%, constipation, weight loss and fever in about 10% each, and diarrhea or abdominal mass in 7% each (13). A currant jelly stool, that is a typical presentation in children, is not usually seen in adults. These symptoms are non-specific and thus, the diagnosis depends largely upon the radiological studies and a CT scan is the most effective diagnostic modality.

Some of the reported causes of enteroenteric intussusceptions are adenomas (6), lipoma, neurofibroma (13), scleroderma (13), Peutz-Jeghers syndrome (13), malignant neoplasms (5,13), and rarely metastatic disease from neoplasms such as melanoma (7,13), lymphoma (13), hepatocellular carcinoma (8), and osteosarcoma (9); other causes include adhesions, local inflammation, Crohn's disease (10) and idiopathic. Cecal cancer (14), metastatic cancer (melanoma) and idiopathic causes such as Meckel's diverticulum (14) may contribute to ileocecal intussusception. Colocolonic intussusceptions are usually due to benign causes such as lipoma, adenoma, lymphoid hyperplasia (13), malignant colon cancers (13) local inflammation, or can be due to rare complications of Crohns disease (11) and ulcerative colitis (12). Some other etiologies include blunt abdominal trauma, percutaneous endoscopic

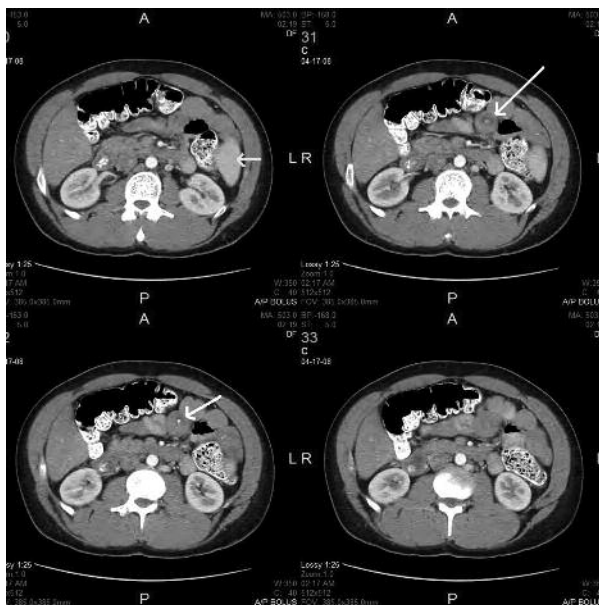


Figure 1: CT scan of abdomen demonstrating apparent bowel wall thickening (yellow arrow) within several jejunal loops in the left upper quadrant, with targetoid appearance demonstrated in several jejunal loops with associated punctate hyperdensity (white arrows image 31, 32 in Figure 1).

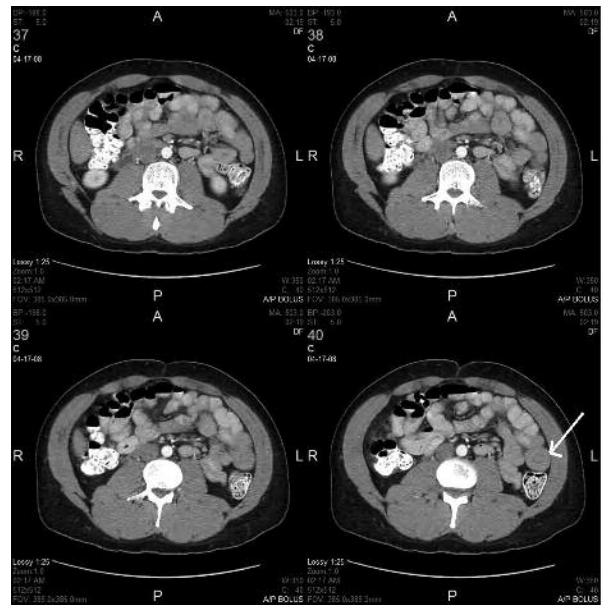


Figure 2: CT scan of abdomen with second area of targetoid appearance suggesting short segment intussusceptions (white arrow, image 40).

gastrostomy tubes, tuberculosis, systemic lupus erythematosus, celiac disease, HIV, lymphoma, and Meckel's diverticulum (2). *Ascaris* has also been reported as a cause of intestinal intussusception (4). Asymptomatic transient adult intussusceptions have been described in literature, which are regarded as a consequence of physiological peristalsis. These may become symptomatic when spontaneous reduction is unsuccessful (2). In surgically proven cases of adult intussusceptions, malignant causes have been described in 48% and 43% of enteric and colonic lesions respectively (13).

Most authors believed that laparotomy should be performed on all patients because of high likelihood of identifying a pathologic lesion; however, there are no universally accepted guidelines (3). As a general rule, as malignant etiologies predominate large bowel intussusceptions, resection without reduction is recommended to avoid perforation and spillage of bacteria and possible malignant cells. Small bowel intussusceptions, on the other hand, can be managed conservatively in most cases with reduction and a meticulous follow-up without the need for surgery. Nonetheless, if malignancy is suspected or the bowel is inflamed or ischemic, resection without reduction should be performed (1).

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