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Case Report

Adult intussusception as rare anomaly: case reports and management

Kirti Savyasacchi Goyal*, Tejinder Pal Singh Sodhi, Maneshwar Singh Utaal, Nitish Dhawan, Mani Garg

Department of General Surgery, MMIMSR, Mullana, Ambala, Punjab, India

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***Correspondence:**
Dr. Kirti Savyasacchi Goyal,
E-mail: kirtisgoyal@gmail.com

ABSTRACT

Adult intussusception occurs infrequently and differs from childhood intussusception in its presentation, aetiology, and treatment. Diagnosis can be delayed because of its longstanding, intermittent, and non-specific symptoms and most cases are diagnosed at emergency surgery. Use of computed tomography in the evaluation of patients with abdominal pain, the condition can be diagnosed more reliably. Treatment entails simple bowel resection in most cases. Reduction of the intussusception before resection is controversial. Laparoscopic management has been reported to be a safe and feasible option regardless of the etiology. This paper presents the diagnosis and management of two cases of adult intussusception, their presentation and management.

Keywords: Intussusception, Laparoroscopic approach, Taget sign

INTRODUCTION

Intussusception is the telescoping of the proximal part of the gastrointestinal tract (intussusceptum) into an adjacent section (intussuscipiens). Intussusception mostly occurs in childhood and is rare in adults with the incidence of approximately 2-3 per 1,000,000 per year.[1] Adult intussusception is a rare condition which accounts for 1% of patients having bowel obstruction, and 5-10% of all intussusceptions cases. Unlike the presentation of pediatric intussusception, in adults, the presentation is variable. Intussusception in children where 90% of cases are idiopathic, while in adults approximately 70%-90% of cases of intussusception are secondary to an underlying pathology, with 65% being due to benign or malignant cause.[2]

We present two case reports presented at Maharishi Markandeshwar Institute and Medical Sciences and Research Mullana, Ambala (India) followed by diagnosis and therapeutic modalities of this entity.

CASE REPORTS

Case 1

A thirty three year old male came with complaints of colicky pain abdomen more so in the periumblical area with abdominal distention and inability to pass flatus and stools since last 15 days. History of similar complaints was also given in the last year requiring hospitalization and which got relieved invariably over 2 days' time. Physical examination revealed a minimal dehydration with abdominal distension with no palpable abdominal mass and mild diffuse tenderness while rectal examination was normal. The vital signs including the temperature, the pulse, the blood pressure and the respiratory frequency, were within normal limits. Plain abdominal radiography suggested intestinal obstruction, by showing multiple air-fluid levels. Laboratory investigations showed mild anaemia and leucocytosis. Patient was treated on line of intestinal onstruction with nasogastric tube and Foleys catherter in situ. Ultrasonography revealed concentric rings of hypoechoic

and echogenic layers associated with the sonographic appearance of intussusceptions. A corresponding contrast-enhanced abdominal CT also demonstrated the ileo-ileal intussusception (Figure 1). The leading cause for the same was a subserosal lipoma. A decision for an emergency surgery as planned. Laparoscopic approach was made through three ports with camera through supraumblicalport (10 mm). Another port in right midclavicular line (5 mm) at the level of umbilicus and third port in left spinoumblical line at just lateral to midway (5 mm). Ileum was traced intraoperatively and ileoileal intussuception was localized almost 50 cm proximal to Ileocecal junction (Figure 2) which was reduced by gently applying pressure laparoscopically which showed a lipoma as leading point (Figure 3). Wedge resection was performed at the fundus followed by primary closure through a midline small laparotomy incision (4 cm) infraumblically in two layers and tissue sent for histopathology. Postoperative period was satisfactory and histopathlogy also confirmed lipoma.

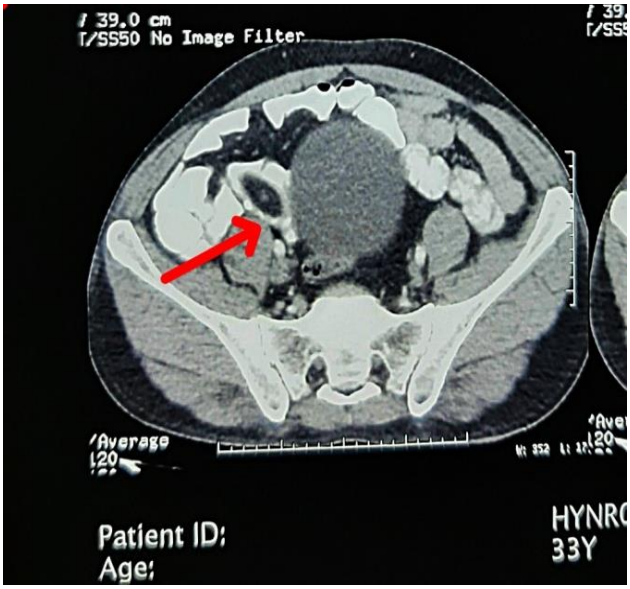

Figure 1: Axial CT of the abdomen shows the edematous wall of the intussuscipiens (classic target lesion).

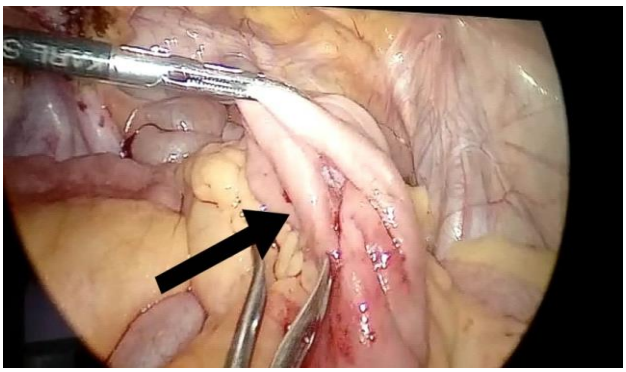

Figure 2: Intraoperative view of Intussusception (laparoscopic approach).

Figure 3: Lead point lipoma (case 1).

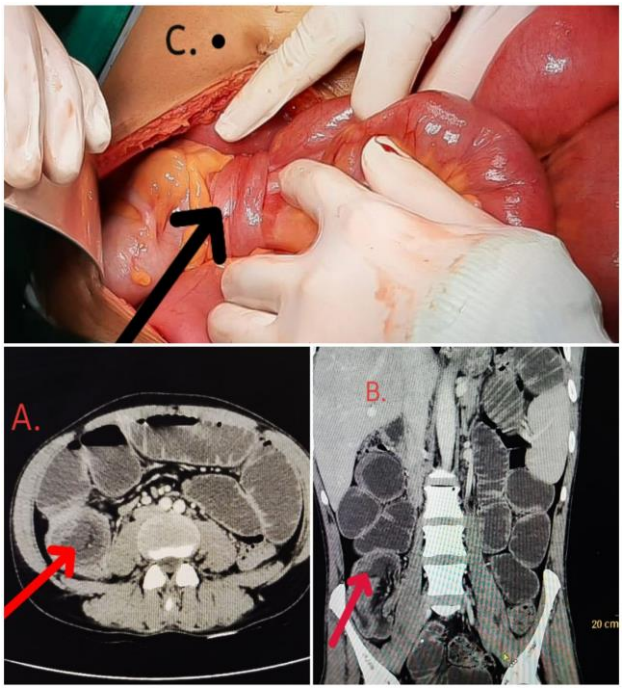

Figure 4: (A) Axial CT demonstrating classic target lesion; (B) coronal view depicting ileo-ileal intussusceptions with lead point as polyp; (C) intraoprative view.

Case 2

A thirty seven year old male was brought with complaints of pain abdomen, vomiting and inability to plass flatus and stools since 3 days. No other significant positive past or medical history. Physical examination revealed abdominal distention Physical examination revealed a minimal dehydration with an abdominal distension with no palpable abdominal mass. The vital signs including the blood pressure (100/70 mm Hg) temperature, the pulse, the blood pressure and the respiratory frequency, were within normal limits. Plain abdominal radiography

suggested Intestinal obstruction, by showing multiple air-fluid levels.

Ultrasonography revealed small bowel loop enclosed within another bowel loop seen in right iliac fossa giving doughnut appearance on transverse scan. A corresponding contrast-enhanced abdominal CT also demonstrated the ileo-ileal intussusceptions with an intramural polyp as the cause (Figure 4).

Laparotomy was planned for the patient with lower midline incision and an ileo-iloeal intussusception was located around 20 cm proximal to ileo-cecal junction which was reduced by manual pressure and lead point was traced. The lead point came out to be ileal polyp of almost 2×1 cm (subserosal). Resection with ileo-ileal anastmosis was done with closure in 2 layers and sample sent for histopathology. The postop period was satisfactory and histopathology tissue revealed inflammatory polyp of ileum.

DISCUSSION

Intussusception is relatively rare in the adult population, and this along with the vague clinical features, makes diagnosis difficult. The primary mechanism by which intussusception is thought to occur is when an intraluminal mass is pulled forward by peristalsis and drags the attached bowel wall segment with it. Pedunculated tumors, such as adenomatous polyps or lipomas, are the classic examples of this group.[3,4] Most adult cases of intussusception occur in the distal small bowel (52% to 55%) or the large intestine (38% to 45%).[5] Adult intussusception is not easily diagnosed because patients usually present with non-specific vague symptoms such as abdominal pain, the most common symptom. Other symptoms include nausea, vomiting, and possible bleeding from the rectum. Early diagnosis of intussusception may prevent the necrosis of the bowel and, in some cases, even save the patient's life.[6] As symptoms are vague, diagnostic imaging plays the main role in diagnosis. Many imaging modalities are used for diagnosis, such as radiographs, ultrasonography, CT and magnetic resonance imaging. The most commonly used are ultrasonography and CT. It is extremely important to diagnose acute intussusception as early as possible, as it leads to intestinal obstruction and gut ischaemia.[7]

Our patients presented symptoms of bowel obstruction. The diagnosis is often delayed in adults given the unspecific presentation and rarity. The commonest symptoms are nausea or vomiting, abdominal colic, change in bowel habits, rectal bleeding and a palpable mass. The classical triad of cramping abdominal pain, abdominal mass and bloody diarrhea is rarely found in adult and were not present in our patients.[8]

Computed tomography (CT) scan is the most sensitive imaging modality for the diagnosis of intussusception with a diagnostic accuracy ranging from 58 to 100%.[9] The classic 'target mass' picture on CT scan as found in our case, is pathognomonic of intussusception. It consists in a central dense area and a halo of low attenuation being respectively the intussusceptum and the edematous intussuscepiens. In a sagittal view, we found the classical sausage sign in our patient. Moreover, CT scan may identify the underlying cause of the intussusceptions.[10]

While in pediatric population, a predisposing cause is rarely found.[12] Treatment in children usually involves barium or air enema for reduction. This may be attempted in adults with idiopathic intussusception but in adults as a population, intussusception is usually secondary to a lead point. Therefore, enemas in this population are rarely successful and can be potentially dangerous. Treatment in adults usually involves surgical intervention that requires reduction, if possible, and resection if necessary. There is debate over whether to reduce or not to reduce prior to surgical resection but the general consensus is that if at all possible, reduction can aid in saving as much viable bowel as possible.[11] Almost 90% of adults with intussusception have an underlying lesion, nearly half of which are malignant.[11]

Laparoscopic management has been reported to be a safe and feasible option regardless of the etiology.[8] In our patient, we attempted to reduce the intussusceptum laparoscopically (case 1) with wedge shape resection followed by repair and resection anastmosis (case 2) in the other case.

- Intussusception though rare in adults, can present as intestinal obstruction.
- Preoperative diagnosis is difficult as symptoms can be intermittent and long standing.
- Frequent use of computed tomography in undiagnosed abdominal pain increases the pick-up rates.

Surgical treatment is required in all patients and there is more emphasis towards resection.

CONCLUSION

Adult intussusception is a rare entity. Surgical resection either via laparoscopy or laparotomy is the best therapeutic attitude in the presence of an underlying lead point.

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