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Unusual form of Acute Intestinal Intussusception in Adults

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Abstract **Case Report**

Acute intestinal intussusception remains a rare pathology in adults which is often secondary to an underlying anomaly, unlike in children. the atypical semiology and the lack of knowledge of this pathology among practitioners makes clinical diagnosis difficult. CT remains the examination of choice for positive diagnosis with rare recourse to exploratory laparoscopy in cases of diagnostic doubt. In the absence of consensus for a conservative approach and given the risk of malignancy of the underlying lesions, surgery remains the rule with oncological resection removing the intussusception tube without any attempt at intraoperative manual reduction. In this paper we report a case of acute intestinal intussusception in which the pathological study of the surgical specimen reveals unusual parietal lesions.

Keywords: Intestinal intussusception, Surgical resection, Case report.

INTRODUCTION

Intussusception is a rare diagnosis in adults. Overall, 5% of intussusception diagnoses occur in adults, and only 1% of intestinal obstructions in adults are associated with intussusception [1]. Unlike children, acute intestinal intussusception in adults most often occurs due to an organic lesion (70 to 90% of cases), with a high incidence of malignancy. Its progressive mode is usually chronic or subacute. It is rarely discovered in the face of an acute picture of intestinal obstruction or peritonitis [2, 3]. The small intestine represents approximately 30%, with a lower risk of malignancy than the colon [1, 2]. Here we report a rare case of ileo-ileal intussusceptions in a 39-year-old female patient who was successfully treated surgically with segmental small bowel resection.

CASE REPORT

A 39-year-old woman with no notable pathological history. With a history of acute abdominal pain of sudden onset three days before admission. faced with no improvement under symptomatic treatment and the occurrence of vomiting, the patient consulted the emergency room of our hospital; Note the absence of transit disorders or digestive bleeding, as well as preservation of general condition without notion of fever.

On admission to the emergency room, the physical examination found a conscious patient, normocolored conjunctiva, normocardium at 80bpm, the abdomen was slightly distended with diffuse tenderness on palpation more marked in the periumbilical and left flank, without palpable mass given the pain hindering deep palpation. the biological assessment shows hyperleukocytosis at 18,300/mm3 as well as an increase in CRP to 276 mg/L, without any other abnormality, notably no anemia or hydro-electrolytic disorders. An abdominal x-ray without preparation was carried out, returning no abnormalities, notably no hydro-aerial levels or pneumoperitoneum. The investigations were completed by an abdominal CT scan with injection of iodinated contrast product showing the presence at the peri-umbilical level of a “target” image compatible with a jejunal intestinal intussusception, with an intussusception ring measuring 58 x 63 mm, responsible for an upstream small bowel occlusion reaching a maximum diameter of 35 mm, with signs of parietal distress, in particular a lack of parietal enhancement of the invaginated loop. This is associated with an intra-peritoneal effusion of moderate abundance (Figure 1). Without other anomalies pointing towards the etiology of this intestinal intussusception.

After preoperative preparation including nasogastric decompression, rehydration and antibiotic prophylaxis, the patient was admitted to the operating room the same day. Surgical exploration by a median laparotomy revealed a suspicious intra-peritoneal effusion of moderate abundance with intestinal

distension upstream of an ileo-ileal intussusception at the level of the left flank located 60 cm from the ileo-caecal valve, we noted a torsion of the invaginated loop and areas of preperforative parietal necrosis, as well as false membranes localized in interloops (Figure 2); the rest of the exploration of the peritoneal cavity did not reveal any other abnormalities. The procedure consisted of a segmental small bowel resection encasing the intussusception coil with creation of a manual end-to-end ileo-ileal anastomosis, without any attempt at intraoperative manual reduction (Figure 3). The early postoperative course was simple with discharge home on day 4.

Pathological studies of the surgical specimen concluded that there were ischemic and hemorrhagic inflammatory changes in the ileal wall with histological peritonitis lesions. The rest of the wall is dissociated by pools of mucin without an epithelial border. Given that the radiological and surgical explorations did not reveal a mucinous tumor, particularly of the appendix, the decision was clinico-radiological monitoring.

Currently 18 months after surgery, the patient is doing perfectly well with clinical-radiological checks without abnormalities.

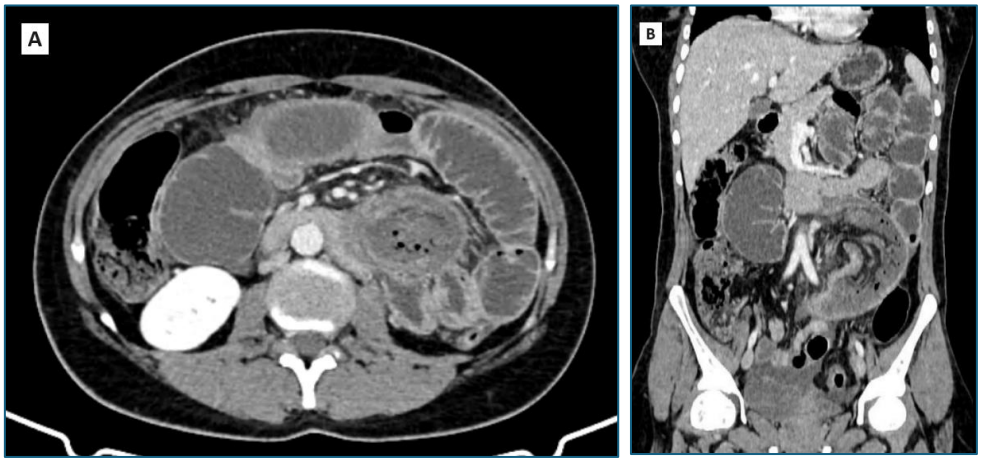

Figure 1: CT images showing an intestinal intussusception responsible for an upstream small bowel obstruction, with a "target" aspect on the axial section (A) and "sandwich" aspect on the coronal section (B)

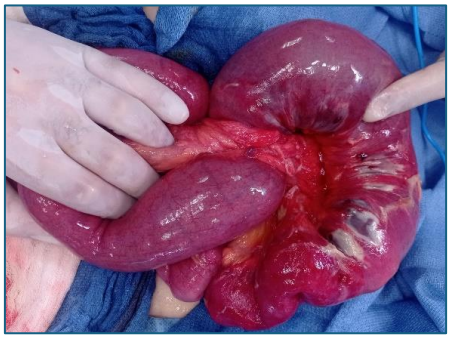

Figure 2: Operative findings: Small bowel distension upstream of ileo-ileal intussusception associated with twisting of the invaginated loop and areas of preperforative parietal necrosis

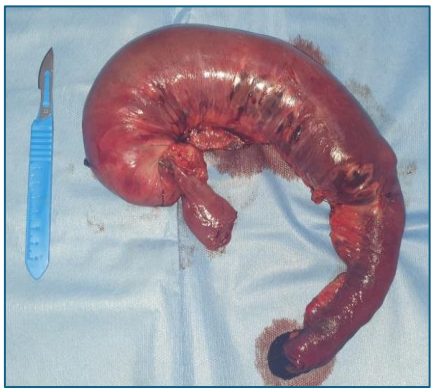

Figure 3: Operative specimen: Segmental small bowel resection encasing the intussusception coil without intraoperative manual reduction

DISCUSSION

Intussusception refers to the telescoping of the proximal segment into the lumen of the distal segment of the intestine causing obstruction, ischemic injury, and ultimately gangrene and perforation [2, 4]. Intussusception usually occurs during the fifth and ninth months of life and is rare in adults, accounting for 1% of all intestinal obstructions and only 0.003–0.02% among all hospitalized patients [5, 6]. In adults, an organic cause is found in 70 to 90% of cases while 8 to 20% are idiopathic. However, intestinal intussusception is primary in children in 90% of cases [1, 7]. This organic cause may correspond to malignant tumors representing the primary etiology of intussusceptions in adults, especially in the colon (60%), while they are secondary to a benign lesion (especially in the small intestine) in 25% of cases. cases and 10% idiopathic. These lesions are represented by stromal tumors, lipomas, polyps, lymphadenopathy, digestive thickenings. Melanoma, adenocarcinoma, etc. [2]. Any intraluminal lesion that alters normal peristaltic activity, producing an area of constriction and relaxation sequence, thereby telescoping the digestive loop across the distal lumen of the intestine [2].

The diagnosis of ileo-ileal intussusceptions can be simple in the presence of a palpable abdominal mass related to the intussusception sausage, and pain is the symptom found in 71 to 90% of intussusceptions in adults [1]. However, the rarity of this pathology in adults as well as its atypical clinical presentations are the main causes of preoperative diagnostic errors or diagnostic delays [3, 4]. Our patient presented with acute abdominal pain with slight abdominal distension.

Abdominal ultrasound has high sensitivity and specificity in the diagnosis of intussusceptions, while abdominal radiographs are important to exclude obstruction in an emergency situation [2, 3, 7]. Abdominal tomography with injection of the contrast product remains the examination of choice in this situation, especially in cases of emergency with occlusive syndrome, allowing reliable identification of intussusception and increasing the accuracy of the diagnosis which can reach 58 to 100% with a specificity of 57 to 71% in adults [1, 3]. It makes it possible to diagnose the obstructive syndrome, its mechanism, in this case intussusception, its precise location and to show its cause. It can detect an organic cause in 71% of cases. The two classic images are the “sandwich” image in longitudinal section showing the head of the intussusception and the “roundel” image in cross section showing the sausage of the intussusception. The use of MRI and endoscopy should be discussed according to needs [2]. However, preoperative diagnosis is often difficult due to the nonspecific presentation of the tumor, hence the recourse, according to some authors, to diagnostic laparoscopy [2]. As in our patient's case, the CT scan reveals the presence of intussusception with the "target" sign which is a common appearance on CT.

The treatment of intussusception in adults is surgical and the intervention of choice remains resections according to the rules of oncological surgery given the high incidence of malignancy [1, 4, 6]. It still remains difficult to differentiate a malignant etiology from a benign etiology preoperatively and intraoperatively, thus presenting a risk of transperitoneal seeding following tumor breakout during the handling of friable malignant tissues [1, 6]. To date there is no clear consensus on whether preoperative reduction of intussusception in an adult patient should be attempted before undergoing surgical resection, apart from a few case reports documenting resolution of the intussusception. colonic intussusception after a colonoscopy and spontaneous resolution or after medical treatment of intestinal intussusceptions [1]. Thus, surgical resection without any attempt at manual reduction is the treatment of choice, regardless of the size and cause of intestinal intussusception in adults [1, 2, 4].

CONCLUSION

The rather difficult preoperative diagnosis and the rarity of ileo-ileal intussusceptions in adults present a challenge for practitioners. In recent years, therapeutic management has been questioned in favor of conservatives options, particularly for idiopathic intussusceptions other than complicated forms, hence the need for studies comparing management options for idiopathic small bowel intussusception in adults. In the absence of a clear consensus, surgical resection remains the standard treatment.

Conflicts of Interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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