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Intestinal Intussusception Due to Lymphoma in an Adult: A Case Report

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Abstract **Case Report**

Acute intestinal invagination, also known as intussusception, is characterized by the displacement of a segment of the intestine into an adjacent segment through a glove-like turning mechanism. While it is common in children, it remains rare in adults. In adults, 70 to 90% of cases are of organic origin, primarily neoplastic (65%). Due to its often-secondary nature, treatment is surgical. In our case, the patient is a 64-year-old woman admitted for intestinal invagination.

Keywords: Intussusception, Lymphoma, invagination.

INTRODUCTION

Acute intestinal invagination, also known as intussusception, is characterized by the displacement of a segment of the intestine (invaginated loop) into an adjacent segment (receiving loop) through a mechanism of a glove-like turning [1]. This condition is one of the most common causes of obstructive syndrome in children and infants, but it remains rare in adults, accounting for only 1% of intestinal obstructions and 5% of intestinal invaginations [2]. In adults, an organic cause is found in 70 to 90% of cases, with a significant proportion of 65% being neoplastic causes [2]. Due to the often-secondary nature of this pathology in adults, treatment is always surgical. ur case, the patient is a 64-year-old woman admitted for intestinal invagination.

CLINICAL CASE

This is a 64-year-old female patient with a history of treated hypertension, insulindependent diabetes, and chronic renal failure secondary to polycystic kidney disease, requiring hemodialysis three times a week.

The symptoms started one month ago with diffuse abdominal pain, intermittent cramping, associated with food vomiting and a weight loss of 4 kg over the month.

The laboratory results showed hemoglobin at 8.3 g/dL, white blood cells at 4700/mm³, platelets at 219,000/mm³, CRP at 131 mg/L, creatinine at 67 µmol/L, and albumin at 29 g/L.

Abdominal CT imaging revealed a viable jejuno-jejunum intussusception in the left iliac fossa, approximately 10 cm in length, with a diameter of 44 mm and extending over 84 mm. It also showed multiple mesenteric lymphadenopathies, with the largest ones merging to form a mass measuring 43 mm x 23 mm in the umbilical region. Bilateral polycystic kidneys were also noted.

Due to the chronic renal failure, preoperative preparation included a dialysis session and a transfusion of two units of red blood cells.

The surgical treatment consisted of laparoscopic exploration, revealing a viable jejunal intussusception in the left iliac fossa, about 10 cm long. The procedure was converted into a mini-laparotomy, performed through a peri-umbilical midline incision, allowing for the resection of the intussusception along with two large mesenteric lymph nodes measuring 3 cm and 6 cm (Fig 1). A manual jejuno-jejunostomy was performed.

Postoperative recovery was uncomplicated, with the patient receiving dialysis on the first postoperative day and being discharged on the seventh postoperative day.

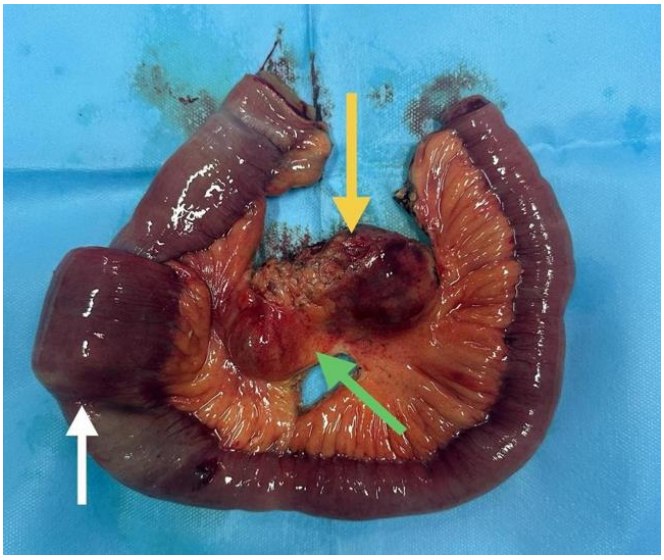

Figure 1: Surgical piece image: white arrow (intussusception segment), green arrow (3 cm lymphadenopathy), Yellow arrow (6 cm lymphadenopathy)

DISCUSSION

In adults, the exact mechanism of intestinal invagination remains unknown in 8 to 20% of cases (primary or idiopathic cause) [3]. Any abnormality of the intestinal wall or irritation of the lumen can disrupt normal peristaltic activity, thereby initiating the invagination of one segment of the intestine into another [4]. This situation leads to intestinal obstruction accompanied by inflammatory changes, ranging from thickening to ischemia of the intestinal wall [5]. Compression at the level of the neck causes venous and lymphatic stasis, leading to edema that worsens the compression, disrupts arterial flow, and may cause damage to the intestinal mucosa, even resulting in necrosis of the wall and perforation in the case of delayed diagnosis [6]. However, this stricture can sometimes be mild despite several days of progression, explaining good clinical tolerance [7].

Most intestinal invaginations in adults originate in the small intestine, and the majority of lesions are benign, representing 50 to 75% of cases in various studies [8]. Benign tumors include lymphoid hyperplasia, lipomas, leiomyomas, hemangiomas, and polyps. In our case, the invagination was ileal due to a B-cell lymphoma.

The general signs of acute intestinal invagination in adults vary depending on the etiology and stage of the disease, but they generally include a deterioration in general condition and signs of dehydration. The clinical symptoms are varied and often misleading, with manifestations ranging from acute intestinal obstruction to a progressive subocclusive condition, which can last from a few days to several weeks, as well as non-specific abdominal symptoms such as changes in transit, diffuse abdominal pain, and gastrointestinal bleeding, sometimes for several months [9]. Our patient complained of diffuse abdominal pain with food vomiting and a weight loss of 4 kg over the course of a month.

Upon inspection, abdominal distension may be observed, although it is not constant. It can be part of a low-location obstructive syndrome, and its significance depends on the location and duration of the invagination. Approximately 50% of patients in crisis may present a palpable swelling corresponding to the invagination mass, which can be detected in the lateral decubitus, dorsal, and Trendelenburg positions [10]. It is important not to confuse this mass with one related to the underlying condition [11].

Rectal palpation may reveal the invaginated mass depending on the length of the invagination. The examination may also reveal blood-tinged mucus, thus confirming rectal bleeding, a valuable sign of intestinal distress.

Small bowel invagination is the most common form in adults, representing 55 to 80% of cases [12]. It often presents as a picture of high intestinal obstruction, with early vomiting and abdominal pain, sometimes accompanied by hematemesis. This is the symptomatology presented by our patient, except for hematemesis.

Biological testing helps assess the impact of the condition on the patient's general status, adapt resuscitation measures, and prepare the patient for surgery. Simple abdominal X-rays, although a basic examination in cases of abdominal pain, are not very useful for diagnosing invagination due to the incomplete obstruction. Ultrasound, more accessible, can be used quickly, although it is sometimes limited by overweight or significant abdominal distension.

Abdominal CT scan is a more precise diagnostic tool, allowing confirmation of invagination, localization of the affected segment, identification of the underlying etiology, detection of any tumors, and searching for signs of intestinal distress or complications. This information is crucial for the surgeon to tailor treatment. The abdominal CT scan of our patient revealed an image of an ileo-ileal intussusception in the left iliac fossa, measuring 44mm in diameter and extending over 84mm, with the presence of multiple mesenteric lymphadenopathies.

The positive diagnosis of intestinal invagination relies on the detection of an intestinal mass with alternating concentric zones in a target-like pattern, forming the invagination mass, along with the classic "crescent" sign of fatty density. Searching for signs of severity, threatening the viability of the intestine, is essential for guiding therapeutic management and assessing prognosis. CT remains the examination of choice for evaluating intestinal distress.

Surgical treatment involves eliminating the invagination and, in most cases, addressing the underlying etiology, as it is a recurrence factor. Laparoscopy, used to diagnose and treat acute intestinal invagination, offers advantages over laparotomy, including less peritoneal trauma, improved postoperative comfort, as well as aesthetic and economic benefits (short hospital stays).

Intestinal resection is required in the case of irreversible or tumoral lesions. Its extent depends on the lesion's location. Regarding restoration of continuity, for a patient in good general condition and without manifest sepsis, primary anastomosis after resection (whether latero-lateral, termino-terminal, or termino-lateral) is increasingly recommended [13].

CONCLUSION

Acute intestinal invagination in adults is a rare condition that is difficult to diagnose due to its clinical polymorphism. Its diagnosis has become easier with advancements in medical imaging. The treatment of adult intestinal invagination is surgical. In more than 80% of cases, its onset in adulthood is associated with an underlying organic pathology.

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