

Case Report

Intestinal resection and primary anastomosis as treatment of intussusception due to ileum lipoma: case report and review

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ABSTRACT

Intussusception is an unusual cause of intestinal occlusion in adults, accounting for 5% of cases, and is the result of an underlying pathology in 90% of cases, 60% of which are tumors. The pathogenesis describes the invagination of an intestinal segment into the lumen of an adjacent segment with subsequent alterations in irrigation, risk of necrosis and perforation. Surgical management is indicated in adult patients to restore intestinal transit and to exclude malignancy as the axis of the intussusception. We present the case of a 58-year-old female patient with enteric intussusception at ileum due to lipoma, who underwent bowel resection and manual end-to-end intestinal anastomosis in two planes.

Keywords: Intussusception, Ileum, Occlusion, Laparotomy, Resection, Lipoma

INTRODUCTION

Intestinal occlusion implies disruption of intestinal transit, multiple mechanical causes are described, of which intussusception occurs 1-5% of cases in adults.^{1,2}

Intussusception is defined as the introduction of an intestinal segment into an adjacent one, resulting in mechanical obstruction. The proximal portion is tractioned by peristaltic activity towards the distal bowel, with development of distension, altered perfusion and perforation of the involved segment.³

It is reported that 63% of the causes of intussusception are due to tumors, with neoplastic etiology being more common, requiring surgical management in order to re-establish intestinal transit and resect the affected segment and the lesion that is the axis of intussusception.⁴

Clinical manifestations are explained in relation to intestinal occlusion, with abdominal pain being the most common presentation.^{4,5} Extension studies may be requested as part of approach, with computed

tomography being imaging study of choice due to its diagnostic accuracy.^{4,6}

Surgical management of intestinal intussusception involves resection of the affected segment and restitution of transit considering free margins and oncological approach depending on the context of each patient due to the high prevalence of malignancy.^{4,7}

CASE REPORT

Case report of 58-year-old female patient with history of irritable bowel syndrome, characterized by chronic abdominal pain related to alterations in bowel movements of 8 months of evolution in medical management with partial response. The patient began to suffer from colicky abdominal pain of 72 hrs duration, poorly localized, with progressive increase, associated with abdominal discomfort, nausea and emesis of food content and inability to pass gas and absence of evacuations.

The patient was admitted to the emergency department and the examination revealed an absence of peristalsis,

abdominal distension, negative rebound, no evidence of organomegaly, empty rectal ampulla, and the rest of the examination was unaltered. General medical management was started with fasting, fluids and a nasogastric tube was placed with a fecal output of 2000 cc. Laboratory tests showed leukocytosis at the expense of neutrophilia. It was decided to perform CT scan of the abdomen with a report of intussusception, with a 24 mm hypodense image of ovoid fat density in the terminal ileum region, distension of the small bowel loops and collapse of the proximal colon (Figure 1). Due to clinical evolution and tomography data, emergency surgery was scheduled.

Exploratory laparotomy decided, identifying presence of enteric intussusception in the distal ileum, invagination was reduced and 3 cm tumor was identified (Figure 2). It was decided to perform a 15 cm intestinal resection of distal ileum and manual end-to-end intestinal anastomosis in 2 planes with 3-0 Vicryl, and incidental appendectomy was performed. Operation was completed without complications. Post-surgical surveillance was continued with fasting for 3 days, analgesic management and double antibiotic coverage. Patient was discharged without complications on postop day 5. Histopathology report was obtained with report of lipoma, negative for malignancy, negative borders for malignant cells.

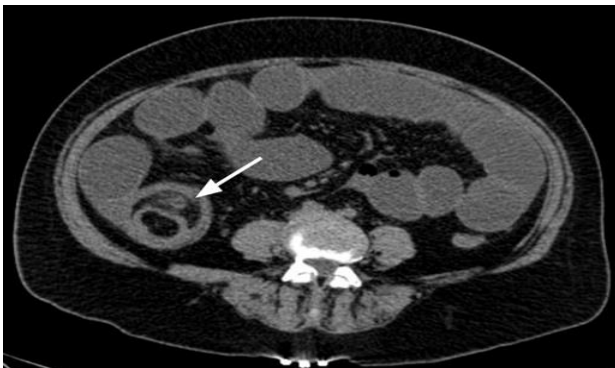


Figure 1: Axial CT of abdomen axial section with evidence of target sign at level of distal ileum, local edema, ovoid image inside intussuscepted loops, with no evidence of free fluid/ perforation.



Figure 2: Product of segmental bowel resection of ileum with intussusception data, 3 cm ovoid lesion as invagination axis. Pathology report in relation to ileum lipoma.

DISCUSSION

Intussusception is an uncommon cause of intestinal obstruction in adults, being necessary to rule out malignant tumors as axis of intussusception in this age group. It accounts for 1-5% of causes of intestinal occlusion.¹

Four types of intussusceptions are described: enteric, involving the small intestine; colic, involving only the colon; ileocaecal, when the ileocaecal valve acts as a guide for intussusception; and ileocolic.^{3,4}

Intussusception is defined as the insertion and sliding of a loop of bowel into the lumen of an adjacent segment. In this pathology, the proximal intestine is traction by peristalsis towards the distal segment.³

In this process there is oedema of the loop, reduced lymph flow, venous stasis, perfusion alterations, development of ischaemia with risk of necrosis and perforation.⁸

Abdominal pain is the most common clinical manifestation in addition to data suggestive of intestinal occlusion, and as the symptoms are not very specific for the case of intussusception, a pre-surgical diagnosis is only reached in 40% of cases.⁴ The patient's clinical context included previous abdominal pain caused by partial intestinal occlusion associated with a lipoma of the ileum.

Imaging studies include plain abdominal X-ray as the initial study. Computed tomography is preferred as the study of choice due to its diagnostic accuracy. In cases where this study cannot be performed, abdominal ultrasound is a viable alternative.^{9,10}

On tomography, the target sign, sausage sign and kidney image have been described. It can also be classified according to the tomography findings into grade I due to the presence of a liquid and air collection between the loops involved, grade II with a hypodense layer suggestive of edema, grade III with evidence of a liquid collection associated with ischemic changes, and grade IV with data suggestive of gangrene and necrosis.^{11,12}

In the context of malignant lesions, surgical reduction is not suggested in order to avoid dissemination of tumor cells and implants, in addition to the high risk of perforation.^{3,6} In the case of invagination in adults, preoperative decompression is not suggested, and up to 70-90% of cases require surgical management.⁵

Concerning the approach to these patients, it is important to mention that given the associated risk of malignancy, surgical management is required to resect the affected segment with an oncological view in order to achieve free margins. Treatment should be carried out according to the trans-operative findings of each patient.^{4,7}

CONCLUSION

The mechanical causes of intestinal occlusion are of interest from a surgical point of view, as resection is necessary. In the case presented, irritable bowel syndrome was ruled out in relation to the symptoms of previous abdominal pain caused by partial intestinal occlusion due to the lipoma of the ileum. In the case of an adult patient, a tumor should always be ruled out as a point of invagination. Surgical management aimed at intestinal occlusion is directed towards the restoration of transit and the necessary interventions according to the cause of the obstruction in each patient. Intussusception in adults is an emergency and requires surgical resolution due to the risk of a malignant tumor as the anatomical site of intussusception.

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