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Case Presentation

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Acute Obstructive Abdomen due to Intestinal Intussusception in an Adult due to Sigmoid Tumor - Case report

Carlos Horacio Vargas Urzagaste, Jorge Guillermo Arzabe Zenteno, Marco Aurélio Palmas de Carvalho, Vanessa Piasecki Farah Yoneda, René de Figueiredo Sea Berindoague, Nicolle Moura de Souza Napoleão, Suelaine Assumpção Côrtes, Isabela Lima Oliveira Sarmento, Lucas Ventura Zanfolim, Vinicius Candelore Trench, Marcelo Luiz Mauad Junior, Alexandre Kapteinat Lima, Mariana Lopes Martins, Yasmin Cardone Martha, Larissa Silva de Sales and Cibelle Marion Bertolli

Department of General Surgery, Hospital de Clínicas Dr. Radamés Nardini - FUABC, Maua-SP, Brasil

*Corresponding author: Carlos Horacio Vargas Urzagaste, Department of General Surgery, Hospital de Clínicas Dr. Radamés Nardini - FUABC, Maua-SP, Brasil, Tel: 5551994752656

Summary

Introduction: Intestinal intussusception (II) is an event considered rare, especially in adults, initially reported in 1674 by Barbette of Amsterdam and later better described by John Hunter in 1789. It is defined as a telescopic invagination of the intestinal loop into the adjacent lumen following. Clinically, the diagnosis is challenging considering the different pain syndromes abdominals. Prior knowledge of the most prevalent etiologies, especially in adults, is important for guide the appropriate technique for treatment. The recommendation in the medical literature is resection oncology, since the malignant tumor presents itself as a common etiological factor of invagination. If not performed as recommended, the prognosis may be changed and the patient, consequently, harmed.

Case report: 44-year-old male patient, who had stopped eliminating feces and flatus for 05 days, abdominal distension and x-ray image demonstrating air-fluid level with probable point stop in descending colon. Performed with tomography which suggested intestinal intussusception in sigmoid region. Urgent surgical approach indicated for obstructive acute abdomen and the invaginating telescopic appearance of the sigmoid loop was confirmed, opting for rectosigmoidectomy oncology. The anatomopathological analysis confirmed the

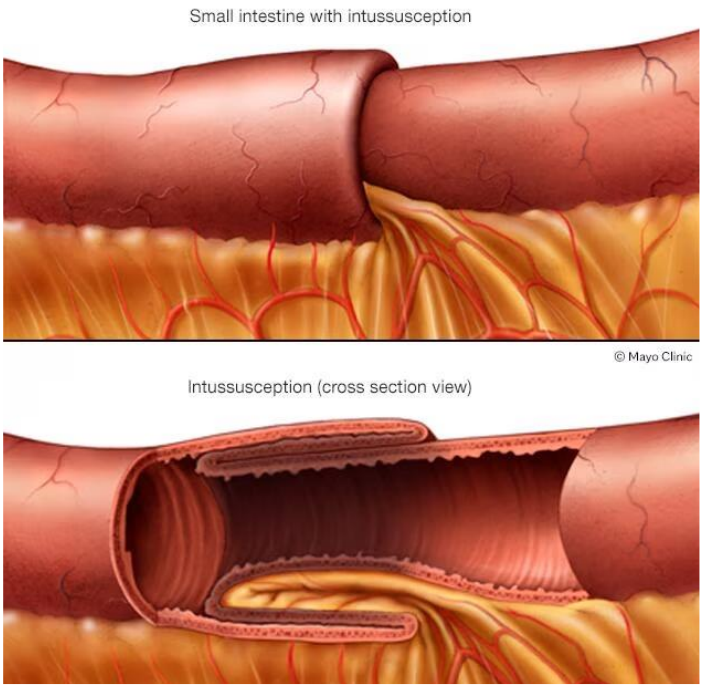
association with malignant neoplasm (adenocarcinoma) with classification pT2 pN1b with 02 affected lymph nodes out of 35 resected next to the piece. The patient was discharged in the third post-operative period with good acceptance of diet and functioning colostomy bag for feces and flatus, walking and denying pain associated with laboratory improvement.

Discussion: II is more commonly reported in pediatric patients and is little explored within the scope of adult patients. It presents a prevalence of 1-5% of obstructive acute abdominal syndromes. Among abdominal surgical diseases in general, there is a prevalence of less than 1 case for each 1300, in children it is 1 in 20. Ninety percent of adults have an etiological factor defined, with neoplasia being the most prevalent. As in the literature and in the case in question, the suspected malignancy in II in adult patients was confirmed with pathology. In pediatric cases, simple reversal of intussusception and/or pexy is sufficient, however this maneuver in adult patients is not recommended. Although rare, due to etiological statistics eminently neoplastic, the possibility of a surgical approach with oncological resection may benefit the adult patient undergoing R0 surgery.

Materials and methods: A literature review was carried out on intestinal intussusception in adults associated with an observational, retrospective and descriptive study using the medical records of the patient. The events were described chronologically, accompanied by the medical residency in General Surgery in a secondary hospital in greater São Paulo.

Introduction

Initially reported in 1674 by Barbette of Amsterdam and later better described by John Hunter in 1789, intussusception is an event considered rare, especially in adults **[1-5]**. Most commonly seen in pediatric patients, intestinal intussusception is defined as a telescopic invagination of intestinal loop into the adjacent lumen following the invagination site. Several complications can occur due to this pathology, such as obstruction, which can lead to ischemia and consequent necrosis, leading to sepsis and ultimately death. Clinically, the diagnosis is challenging considering the various other syndromes that present abdominal pain as a key symptom, in addition to serious laboratory inflammatory results and signs of obstruction/subocclusion on plain x-ray. Usually, the need for imaging complementary is a key factor for certification and surgical indication. The patient's prognosis. It largely depends on early diagnosis and definitive treatment. The most commonly reported signs and symptoms are: tight abdominal pain, intermittent or constant, nausea, vomiting (may be bilious) up to hematochezia/enterorrhagia (probably originating from necrotic tissue). As necrosis progresses, there is the possibility of perforation and peritonitis, in addition to sepsis. Fever is usually a late finding. On physical examination the Pain is usually disproportionate to palpation, secondary to ischemia.



Source: https://www.mayoclinic.org/diseases-conditions/intussusception/symptoms-causes/syc-20351452

Computed tomography appears to be the most sensitive test. A few cases may benefit from ultrasound (USG) that shows the target signal (sensitivity >90% if there is a palpable abdominal mass). The gas overlap, however, hinders the best evaluation by the USG in most cases **[1-3]**. The recommended treatment in adults is oncological resection due to the high incidence of malignancy as a predisposing factor to intussusception. Furthermore, preventing spread by tumor manipulation, it is also recommended not to reverse intussusception, except in cases known to be benign **[2,4]**.

Materials and Methods

To discuss the pathology, a literature review was carried out with various articles and literary sources focusing on intestinal intussusception in adults and sigmoid tumor. Furthermore, an observational, retrospective and descriptive study of the case was based on the reviewed patient records from a secondary hospital in greater São Paulo. What happened was described chronologically, monitored by the General Surgery medical residency service.

Case Presentation

GRS, male, 44y, patient arrives at the unit from home by his own means, being treated by the Emergency Room General Surgery team with a complaint of elimination stoppage of feces and pain in the lower abdomen for 5 days. He denied fever or associated vomiting. Refers to being an alcoholic social status (he was unable to quantify precisely), denies smoking history, and also denies comorbidities or use of continuous medication. Admission tests showed Hemoglobin 15.8, Leukocytes 15870, Platelets 451 thousand, Amylase 41, Total Bilirubin 0.78, GT Range 27, Glycemia 338, Creatinine 0.6, Urea 35, Protein C Reactive 3.3, Potassium 3.2, Sodium 133,

TGO 17, TGP 16, TAP 78S, INR 1.2, APTT 30.7s, Urine 1 wk changes. An x-ray showed air-fluid level with significant dilation of the descending colon and apparent fecal content trapped in the cecum **(Figure 1)**.

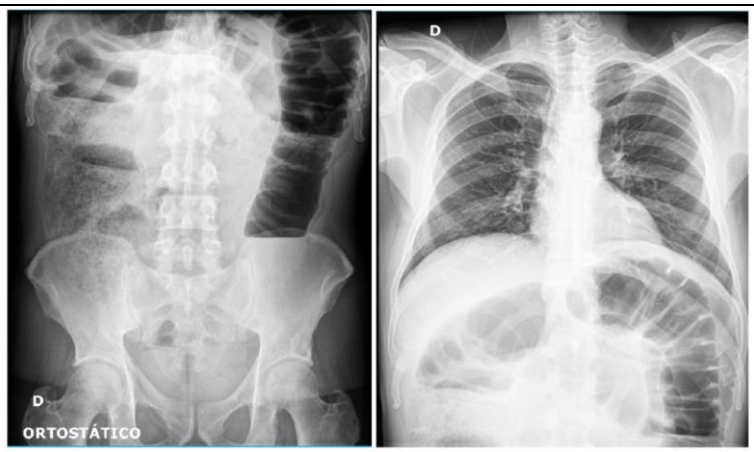


Figure 1: Personal collection.

It was decided to request an abdominal tomography with contrast for surgical planning **(Figure 2)**. After imaging evaluation, the hypothesis of a stenosing sigmoid tumor was raised. In your report suggested the diagnosis with the only change noted in the conclusion: "Distention content fecal / gaseous / water from small intestinal loops and in the colonic frame / associated with the image "in target" in the descending/sigmoid transition (invagination?)".

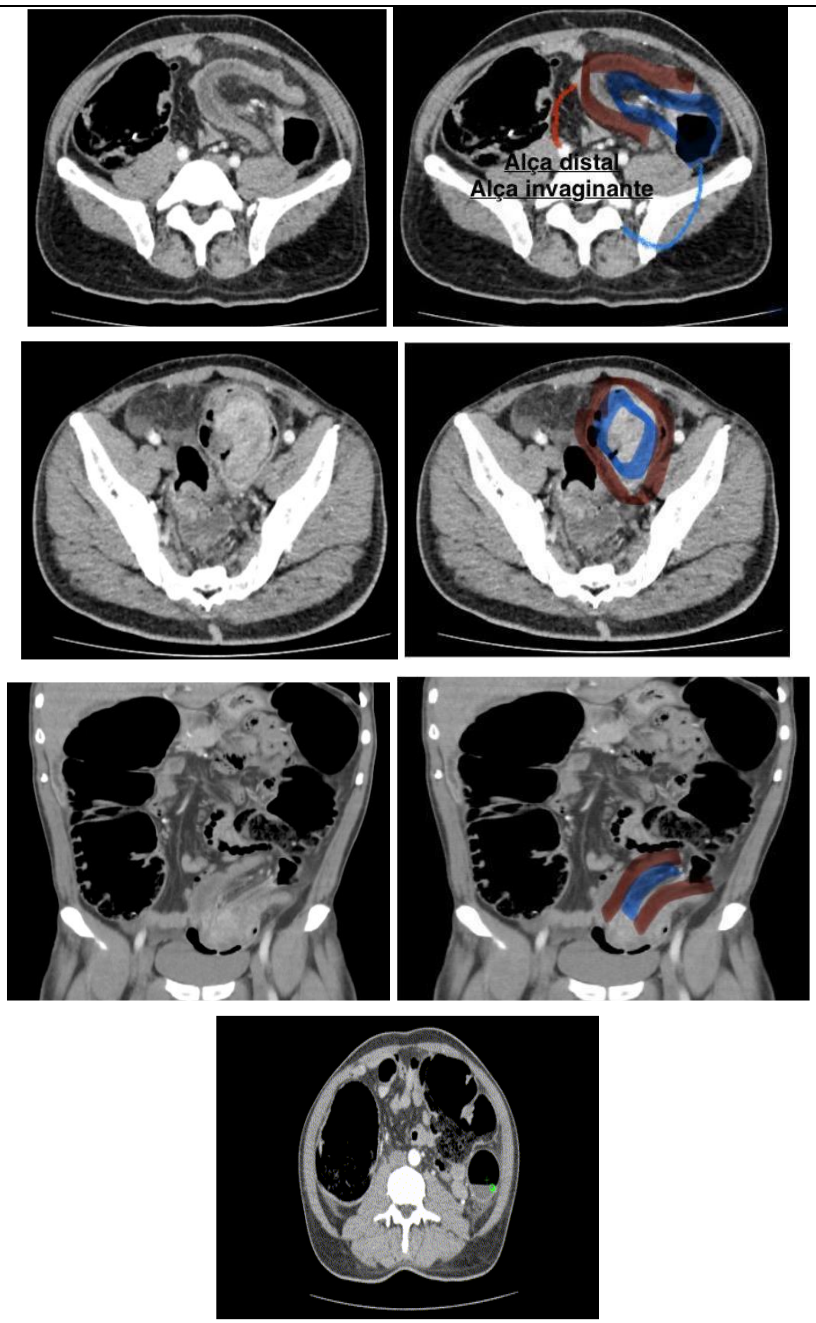


Figure 2: Personal collection. Legend: Adjacent distal loop: highlighted with color reddened its walls; Invaginating proximal loop: highlighted in blue on its walls.

The patient was taken to the operating room and advised about the possibility of needing post-operative colostomy, clinical suspicion of tumor and the need for follow-up outpatient for follow-up and awaiting anatomopathological examination to define further management. Laparotomy was performed with a xiphopubic incision, in inventory: the search for liver injuries was negative, also showing no visible peritoneal lesions. Small amount of liquid intra-abdominal inflammatory aspect, in addition to

tumors in the proximal third of the sigmoid invagination process (intussusception) already partially reduced after manipulation of loops and small loose adhesion in bladder **(Figure 3).**

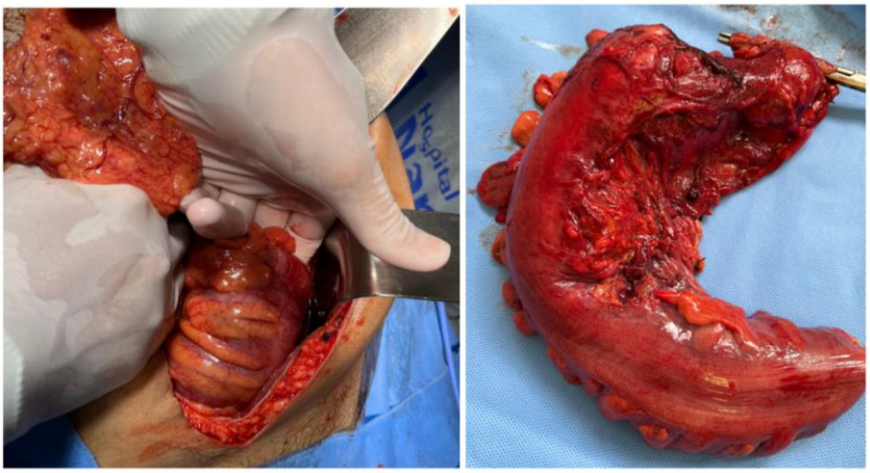


Figure 3: Personal collection.

The emergency option was to perform a left colectomy with rectosigmoidectomy and terminal colostomy with burial of the rectal stump, preserving the rectal artery high due to the distance from the tumor to the transition from sigmoid to rectum and facilitate future reconstruction of transit. Connecting the left sigmoid and colic artery vessels at their respective bases with a margin tumor proximal of 20 cm (ischemic delimitation for colostomy) and distal of 8 cm macroscopic (6 cm microscopically in pathology). The patient did not require packed red blood cells or vasoactive drug during the procedure, which ended uneventfully and was taken to the infirmary.

Patient was discharged in the third post-operative period, already accepting a diet and with a colostomy bag effective for feces and flatus, walking and denying pain with laboratory improvement. This returns in outpatient follow-up for anatomopathological results:

“Histological Type: COLORECTAL ADENOCARCINOMA (WHO/2022); resection: rectosigmoidectomy. Location: sigmoid colon. Macroscopic pattern: vegetative and infiltrative. Size (T): 6.0 cm. Histological grade: grade 2 (moderately differentiated). Standard Microscopic: tubular and solid. Level of invasion: the neoplasm infiltrates the entire intestinal wall up to the muscularis propria. Infiltrative foci with budding pattern ("Tumor Budding"): absent. Reaction peritumoral lymphocyte: mild. Intratumoral lymphocyte reaction: mild. Desmoplastic reaction: moderate. Discontinuous tumor deposits: absent. Angiolymphatic neoplastic infiltration: present. Infiltration perineural neoplastic disease: present. Neoplastic infiltration of the wall of large intra and extramural vessels: absent. Type of polyp from which the carcinoma originated: cannot be determined. Surgical margin radial: free from neoplasia. Proximal surgical margin: free of neoplasia. Distal surgical margin: free from

neoplasia. REGIONAL LYMPH NODES: Two (02) in thirty-five (35) lymph nodes of the peri-colic adipose tissue affected by neoplasia (02/35).] Other findings: intussusception Pathological staging (pTNM): pT2 pN1b".

Discussion

Compared to pediatric conditions, 90% of adults present an etiological factor defined, the most common being neoplasia. As in the literature and in the case in question, suspicion of malignancy in the pathology of intestinal intussusception in adult patients is confirmed with the anatomopathological result. Despite this, other etiological differences are: benign tumors, anatomical variations, postoperative adhesion, endometriosis, idiopathic, fibroids, catheter gastrostomy and jejunostomy tube **[1]**. The prevalence within abdominal surgeries is less than 1 in every 1300, already in children is 1 in 20 **[1]**. It is also responsible for 1-5% of intestinal obstructions in adults **[1]**. In addition, there is still a division of categories based on the place of origin of the condition: enterica, ileo-colic, ileo-cecal and colonic. In the case presented, the colonic presentation was observed, only with sigmoid walls. On the other hand, colo-anal intussusception has the particularity of being more acceptable to reduce the lesion followed by surgical resection (aimed at sphincter preservation) **[1]**.

Conclusion

Although considered rare, a hospital with moderate surgical and reference volume for a large population should sporadically have contact with a clinical condition similar to that presented in the case. The surgery team must be prepared and equipped with a diagnostic and therapy to best deal with the condition presented, taking into account the high prevalence poor prognosis, difficult diagnosis and need for early surgical approach. It is of great importance to discuss malignant pathologies for diagnostic hypothesis and differential diagnosis in patients with clinical signs of acute obstructive abdomen suspected of intussusception. In the case report presented, Computed Tomography with contrast intravenous injection was essential for surgical planning and topographic approach in an R0 way, leading taking into account the emergency situation.

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Citation of this Article

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