

CASE REPORT

INCIDENTAL FINDING OF A SIGMOID INTUSSUSCEPTION ASSOCIATED WITH RECTAL PROLAPSE – A CASE REPORT

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ABSTRACT

Colonic intussusception in adults is extremely rare, accounting for about 5% of all cases of intussusception. The telescoping of a proximal segment in the lumen of the adjacent segment has a classic triad in the symptomatology of children: abdominal pain, bloody diarrhea and palpable abdominal mass. In the adult patient, the symptoms are almost absent, and rarely they consist of constipation, bloody stool, or a malignant pathology that accompanies intussusception, weight loss, and anemia. We present the case of a 86-year-old patient who underwent a surgical procedure for repairing a rectal prolapse; intraoperatively, we discovered a sigmoid intussusception for which we performed a segmentary sigmoidectomy, repairing the rectal prolapse by rectosacropexy with alloplastic mesh.

RÉSUMÉ

Découverte fortuite d'une invasion sigmoïdienne associée à un prolapsus rectal – présentation de cas

L'intussusception colique chez l'adulte est extrêmement rare, représentant environ 5% de tous les cas d'intussusception. Le télescopage d'un segment proximal dans la lumière du segment adjacent a une triade classique dans la symptomatologie des enfants: douleur abdominale, diarrhée sanglante et masse abdominale palpable. Chez le patient adulte, les symptômes sont presque absents, et rarement ils consistent en une constipation, une selle sanglante, ou une pathologie maligne qui accompagne l'intussusception, la perte de poids et l'anémie.

Nous présentons le cas d'un patient de 86 ans qui a subi une intervention chirurgicale pour la réparation d'un prolapsus rectal et péropératoire, nous avons

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découvert une invagination sigmoïdienne pour laquelle nous avons réalisé une sigmoïdectomie segmentaire et réparé le prolapsus rectal par rectosacropexie avec un maillage alloplastique.

Mots-clés: invagination sigmoïde, prolapsus rectal, rectosacropexie.

INTRODUCTION

Intussusception was first described in 1674 by Barbette of Amsterdam¹ and further presented in a more detailed report in 1789 by John Hunter², under the name of „intussusception“.

Intussusception is defined as a rare form of bowel obstruction in adults (more common in children), which represents a telescoping of a proximal segment of the gastrointestinal tract called intussusceptum, into the lumen of the adjacent distal segment called intussusciens.

Sigmoid intussusception in adults can be very difficult to diagnose preoperatively, due to the lack of clinical specific symptoms. The clinical findings are sometimes those of an occlusion and the most frequent misdiagnosis is a tumor. In adults, sigmoid intussusception is often secondary, compared with children, in whom it is mostly primarily. Most of the time, in adults, this diagnosis is made intraoperatively because of the masked associated pathology, in our case, rectal prolapse.

The golden standard for diagnosing colonic intussusception is computed tomography, that can confirm whether the intussusception is idiopathic or it has a lead point lesion: benign and malignant lesion, inflammatory bowel disease, postoperative adhesions, Meckel's diverticulum, metastatic neoplasms or even iatrogenic, due to the presence of intestinal tubes, jejunostomy feeding tubes or after gastric surgery³.

The definitive treatment is bowel resection with oncological principles for every case where a malignancy is suspected. Reduction of the intussuscepted bowel is considered safe for benign lesions, in order to limit the extent of resection or to avoid the short bowel syndrome in certain circumstances³.

CASE REPORT

We report the case of a 86-year-old male who presented at emergency room for a rectal mass that was visible in prolonged orthostatic position, rectal bleeding and constipation. The patient confirmed that the symptoms started one year before, first appeared after bowel movements and retracted when he stood up, but in the last 2 weeks the prolapse was almost constant. He had no associated known pathologies, only a history of bilateral inguinal hernia, surgically repaired 20 years ago.

The clinical exam showed a pseudotumoral mass of 3 cm, protruding through the anus, and stains of blood after the rectal exam. We decided to perform a barium enema, which showed no changes of the colic segments, barium filled the colon evenly, showing normal bowel shape and position and no blockages. Laboratory tests were also normal, indicating only a mild decreased level of hemoglobin 10.3 mg/dL.



Fig. 1. Intussuscepted sigmoid



Fig. 2. Sigmoid colon after manually reducing the intussuscepted segment

We decided to perform an abdominal approach for repairing the prolapsed rectum under spinal anesthesia, on an pubo-umbilical incision. After inspecting the peritoneal cavity, a sigmoid intussusception was found, near 8 cm of sigmoid was telescoped (Fig. 1). That was a surprisingly intraoperative diagnosis, with no previous signs of bowel occlusion.

After manual reduction of the intussusception (Fig. 2), we inspected the sigmoid colon which looked normal with no changes of the mucosa, only a slightly fibrous area, where the intussusception was formed.

Because of the high risk association with intramural tumoral mass, and the higher lengths of the sigmoid (dolico-sigmoid), we decided to perform a segmentary colectomy of the sigmoid colon with an termino-terminal anastomosis. We didn't have to convert to general anesthesia, the procedure being conducted without additional risks. After the segmentary colectomy was performed, we dissected the specimen and the tumoral mass looked like a polypoid adenoma (Fig. 3). Then, we performed a rectosacropexy with a mesh using an anterior approach, followed by peritonization. The patient had

a good postoperatively evolution, without significant abdominal pain and regaining his bowel movements for gas and stool after 48 hours. The patient was discharged after 5 days of hospitalization. Pathology results revealed a moderate grade adenocarcinoma (pT₃N₀M₀), with negative margins, and a relatively good prognosis.

DISCUSSION

Intussusception in adults is relatively rare and presentations are not typical, compared with the triad of symptoms described in pediatric cases (abdominal pain, bloody diarrhea, palpable abdominal mass), as a result the majority of diagnoses are delayed, missed or only made during surgery⁴. In our case, the patient has been admitted for rectal prolapse.

The leading cause of intussusception is still unknown, stimulation of the intestine normally results in a segment constriction proximal to the stimulus and one of relaxation distal to it. Moreover, once bowel becomes intussuscepted, edema follows and the intussusception can become irreducible.

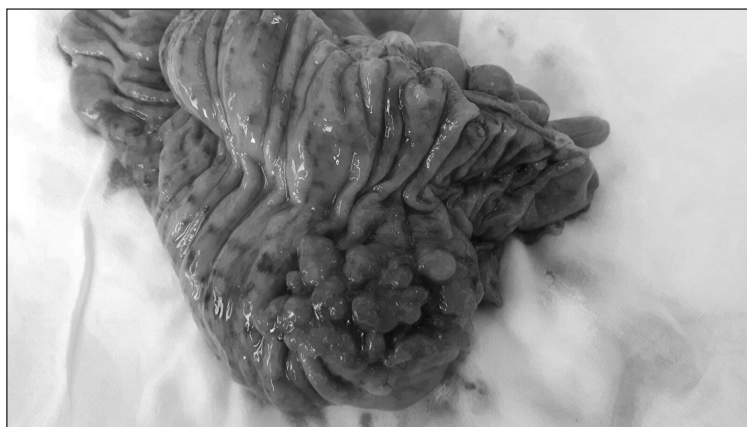


Fig. 3. Macroscopic view of the tumor after sigmoid dissection

Most common, intussusceptions have been classified into four categories, according to the site of origin and they are: enteric, ileocolic, ileocaecal and colonic. Enteric and colonic cases are those that are confined to the small and large intestine. While ileocolic intussusceptions are those with prolapse of the ileum into the colon through the ileocaecal valve, ileocaecal intussusceptions occur when the ileocaecal valve acts as the lead point, or in particular specific cases as caecal tumors or caecal diverticulum⁵. However, in clinical practice it is difficult to differentiate between ileocolic and ileocaecal intussusceptions.

The atypical symptoms must conduct the next steps for a correct diagnosis, made through further investigations. First, an early computed tomography (CT) scan of the abdomen and pelvis is one of the most useful and accurate methods to identify intussusceptions^{3,4}. It can provide sufficient information about the site of the intussusception, its extent, underlying lesion, dilatation of bowel, signs of obstruction and most importantly, whether it is noninvasive.

Second, endoscopic investigations, such as colonoscopy and sigmoidoscopy, play an important role in evaluating the underlying causes (leading point) of intussusceptions and obtaining a histology sample, which will help in planning further treatments⁶.

Barium enema can also be a good step in the diagnosis, it proved useful in colonic or ileocolic intussusception with ‘cup-shaped’ filling defect.

As far as the surgical treatment goes, most surgeons accept that adult intussusception requires surgical intervention because of the large proportion of structural anomalies and the high incidence of occurring malignancy⁷. However, the extent of bowel resection and the manipulation of the intussuscepted bowel during reduction remain controversial³. In contrast to pediatric patients, where intussusception is primary and benign, preoperative reduction with barium or air is not suggested as a definite treatment for adults.

The important risks of preliminary manipulation and reduction of an intussuscepted bowel include: a) intraluminal seeding and venous tumor dissemination, b) perforation and seeding of microorganisms and tumor cells to the peritoneal cavity and c) increased risk of anastomotic complications of the manipulated friable and edematous bowel tissue⁸⁻¹⁰.

CONCLUSIONS

Although adult intussusception is a very rare finding in our current practice, surgeons should have a clear view about the course of treatment because of the challenging outcome. Missing or delaying the

diagnosis because of the nonspecific symptoms and without the pathognomonic signs such as: bloody diarrhea, abdominal pain and palpable abdominal mass, treatment is often delayed. Surgical treatment is considered gold standard in adult intussusception, due to high rate of malignancy, pneumatic or hydrostatic reduction is not advised because of the risk of perforation, which is associated with higher perioperative mortality^{11,12}. Tumor spillage can be avoided by „en bloc“ resection of the lesion, using oncological surgical principles, so reduction of the intussuscepted bowel segment should not be attempted.

COMPLIANCE WITH ETHICS REQUIREMENTS:

„The authors declare no conflict of interest regarding this article“

„The authors declare that all the procedures and experiments of this study respect the ethical standards in the Helsinki Declaration of 1975, as revised in 2008(5), as well as the national law. Informed consent was obtained from the patient included in the study“

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