Colorectal Intussusception Caused by a Benign Colonic Polyp. Report of a Case and Review of the Literature

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INTRODUCTION

Intussusception, or intestinal invagination, occurs when a segment of the small intestine or colon telescopes into a distal segment. This condition is rare in adults, accounting for only 5% of cases. Clinical presentation and management of intussusception can vary significantly and should be evaluated on a case-by-case basis.
The aim of this paper is to present a clinical case of colorectal intussusception caused by a benign polyp, in which a mixed endoscopic and surgical management approach was utilized.

CASE

A 38-year-old female patient with a history of chronic constipation and irritable bowel syndrome experienced a period of worsening constipation, straining, and rectal tenesmus, accompanied by mucorrhea. She had been taking ferrous sulfate for two weeks for mild anemia. She presented to the emergency department with worsening symptoms and hypogastric pain. During the physical examination, her abdomen was soft, with tenderness in the hypogastric region, without signs of peritoneal irritation. A digital rectal examination revealed an empty rectal ampulla without any bulges or asymmetries, and a normal sphincter tone. Laboratory tests indicated a CRP level of less than 0.4 mg/dL, leukocyte count of 10,100/uL, and a hemoglobin level of 11.8 g/dL, with all other values within the reference range. A contrast-enhanced CT scan of the abdomen and pelvis identified a collection of mesorectal fluid containing gas bubbles, suggesting a potential perforation. For further evaluation, a pelvic magnetic resonance imaging (MRI) scan was performed, which revealed colorectal invagination with a sigmoid polypoid mass resembling a villous adenoma acting as the leading point (Fig. 1).

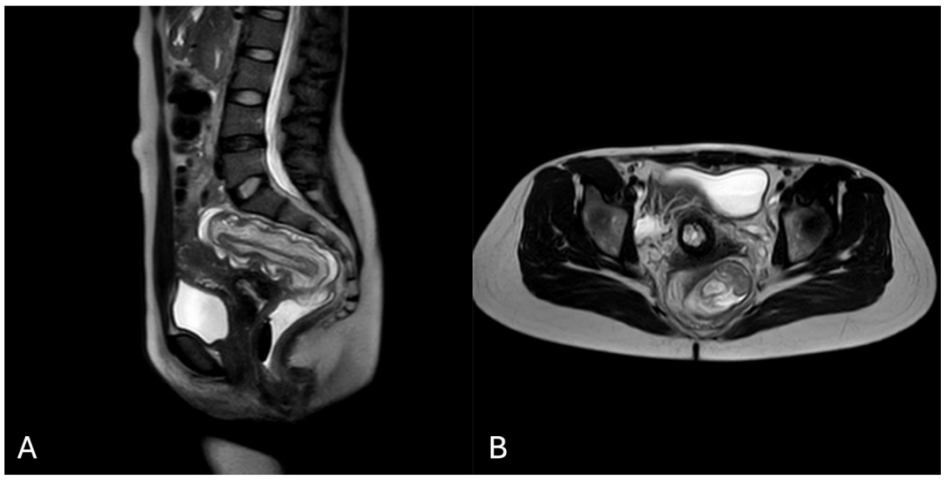

Figure 1. *MRI T2-weighted images.* ***A.*** *Sagittal section showing colorectal invagination.* ***B.*** *Axial section showing the villous adenoma.*

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A colonoscopy was performed, which revealed a large invagination of the sigmoid colon into the lower rectum. There was ischemic mucosa surrounding the invaginated area, and at its caudal end, a benign-looking multilobulated polyp was present that could be resected via colonoscopy (Fig. 2A). The polyp was elevated with injection of adrenaline solution (1:20,000) and was removed using a diathermy loop (Fig. 2B). Due to the inability to reduce the segment, it was decided to proceed with exploratory laparoscopy as part of the management.

During the operation, an elongated and dilated sigmoid colon was observed with an intussusception up to the middle rectum of approximately 20 cm in length, which was reduced with forceps without incident (Fig. 3). The patency and vitality of the colon and rectum were confirmed.

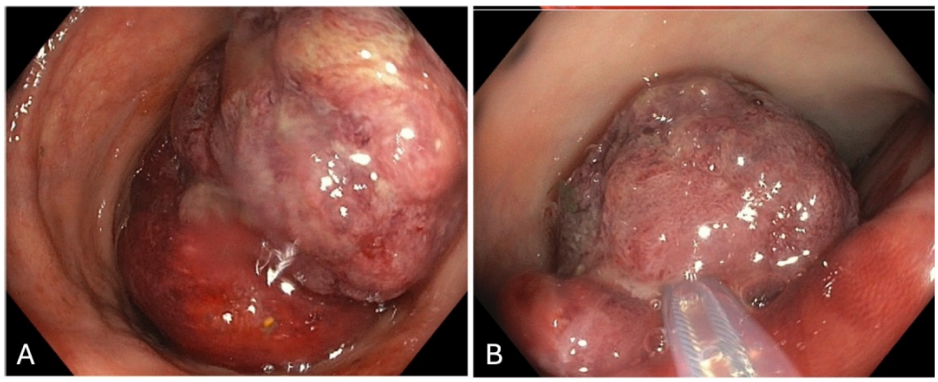

Figure 2. *Colonoscopy.* ***A.*** *Large invagination of the sigmoid colon into the rectum, with ischemic mucosa and a large lobulated polyp acting as a lead point.* ***B.*** *Resection of the adenoma with a diathermy loop.*

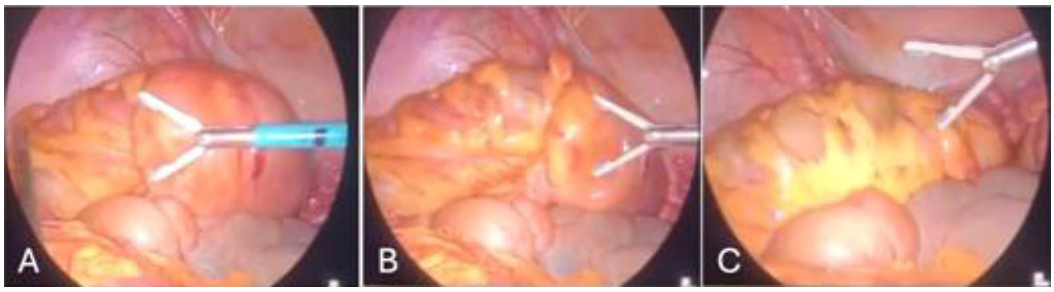

Figure 3. *Laparoscopic view of colorectal intussusception.****A****. Partial reduction.* ***B.*** *Complete reduction.* ***C.*** *Colonic ischemia is not observed.*

The patient's recovery in the postoperative period was favorable, with a gradual reduction in symptoms and restoration of bowel function from the first day. She was discharged on the third day. The histopathological report showed a tubulovillous adenoma with high-grade dysplasia and small areas of well-differentiated intramucosal adenocarcinoma. As a result, the patient was considered cured after resection.

DISCUSSION

Intussusception can occur in any part of the digestive tract. A systematic review of 1,229 patients revealed that enteroenteric intussusception is the most prevalent type, accounting for 50% of cases. Ileocolic intussusception follows, accounting for 30% of cases, while colocolonic and colorectal intussusception occur less frequently, comprising approximately 20% of cases.[2,3] This distribution is likely because a significant portion of the colonic segments is attached to the retroperitoneum, which limits movement and reduces the risk of intussusception.

Unlike intussusception in pediatric patients, where the etiology is typically idiopathic, in adults, the condition is associated with a lead point in 48–77% of cases.[3-5] This may be a benign or malignant tumor, or abdominal adhesions resulting from previous surgeries.[4-6] The most common etiology of an intussusception lead point of the intussusception is benign tumors, such as lipomas, polyps, and gastrointestinal stromal tumors. In contrast, malignant tumors are less common, and occur more frequently in the colon and rectum than in the small intestine.[2-4]

Intussusception in adults accounts for about 1% of bowel obstructions. It can present with various symptoms, which may be non-specific or even asymptomatic.[7] The most common symptoms are abdominal pain, nausea and vomiting. Other symptoms, such as straining, tenesmus, and obstructive defecation syndrome, may occur in cases of colorectal intussusception.[8,9]

The diagnosis of intussusception can be challenging due to the non-specific nature of its symptoms, requiring the use of

multiple diagnostic tools. Imaging is critical to an accurate diagnosis, with options including ultrasound, MRI, and contrast-enhanced CT scans. The latter is the most commonly used, with a diagnostic accuracy of 77.8%.[2] However, some cases cannot be detected preoperatively and are diagnosed at the time of surgery.[7]

Management of this condition varies and should be evaluated on an individual basis. In some cases, if there is no identifiable cause, spontaneous reduction may occur followed by conservative management. In other cases, if polyps or small tumors are present, reduction and resection of the lead may be performed by colonoscopy.[10] Finally, in more complex cases involving malignant tumors, the indication is to perform the appropriate oncologic resection without prior reduction due to the risk of intraluminal spread.[11]

CONCLUSION

Intussusception in adults is rare, especially in the colorectal location, and in most cases there is an underlying cause. Management varies and should be considered on a case-by-case basis.

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