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Intestinal Intussusception in the Elderly: A Case Report

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Abstract

Intestinal intussusception in adults is unusual and presents unclear symptoms. Due to its mostly malignant etiology, the most frequently indicated treatment is resection of the affected segment and anastomosis. In this case a 70-year-old male patient who consults with acute abdominal symptoms is taken to the operating room where an ileocolic intussusception is evident. A side-to-side anastomosis is performed and the patient shows adequate progress. The pathology of the surgical specimen is reviewed and no malignant disease is evident, so it is considered a case of idiopathic etiology.

Introduction

Intestinal intussusception in the elderly is a rare disease, unlike intussusception in children, which represents 85 to 95% of cases of intussusception. Because of its nonspecific and subacute symptoms, it is often underdiagnosed. There are no extensive case series due to the low frequency of the entity¹.

Morera and Hernandez describe that excluding the pediatric population, the median age is 45 years, with abdominal pain being the main symptom. Ileocolic intussusception represented only 21%, the most frequent being enteroenteric intussusception (61%) without involving the colon. Proliferative lesions are the most common causes of intestinal intussusception¹.

Clinical Case

A 70-year-old male patient presented to the emergency room without chronic illness and 4 days without being able to defecate. He reported that he had rectal bleeding in the 24 hours prior to consulting. Clinical evaluation revealed a distended abdomen with signs of peritoneal irritation, increased intensity and frequency of gastrointestinal sounds, and a digital rectal exam with bleeding stigmata. No palpable mass or inguinal lymphadenopathy was evident. Blood tests were performed, which reported 20,000 white blood cells, with neutrophils in 77%, blood pH at 7.49 and lactate at 1.4. Abdominal X-ray showed dilation of small bowel loops, with no presence of distal gas in the rectal ampulla. With a clinical diagnosis of acute surgical abdomen due to intestinal obstruction, it was decided to take the patient to the operating room to perform exploratory laparotomy.

During the exploration of the abdominal cavity, an ileocolic invagination of approximately 15 cm of the terminal ileum segment was observed, which presented irreversible vascular changes. Therefore, it was decided to resect the compromised segment and perform a manual side-to-side ileocolonic anastomosis.

Evolution: The patient was stable after surgery. Enteral feeding was started after 48 hours and he was discharged on the 5th day without



Figure 1: Abdominal X-ray showing distension of small bowel indicating an obstructive process.

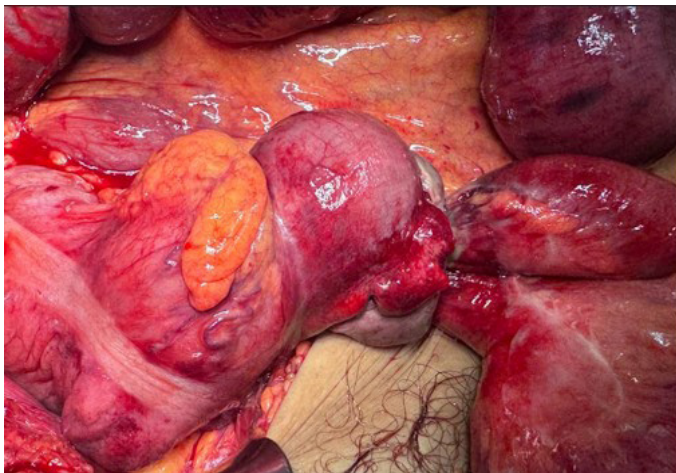


Figure 2: Intraoperative finding of intestinal intussusception ileocolic.

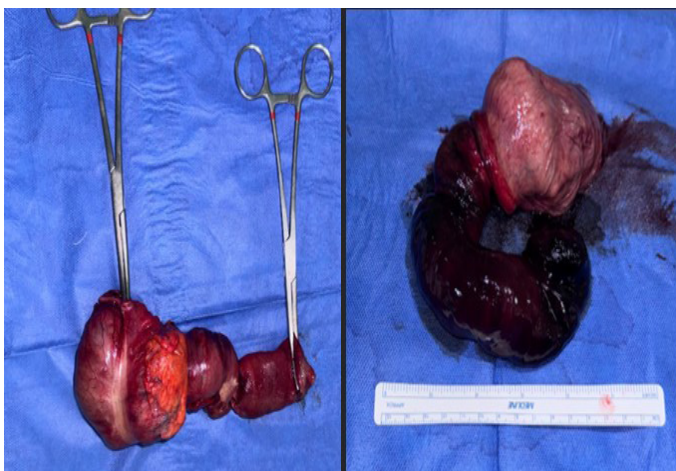


Figure 3 & 4: A Resected surgical specimen. B. Resected intestinal segment with irreversible vascular changes in the terminal ileum.

complications. The specimen was analyzed by pathology and reported “intramural necrosis secondary to intestinal intussusception.” No adenopathies or malignancy were evident in the surgical specimen.

Discussion

Lesions that cause intestinal intussusception at colon are usually of malignant origin (70 to 90%) (melanoma, sarcoma, lymphoma) and lesions of the small intestine are mostly benign origin (lipomas, hamartomas, adenomas), however only 10% are of idiopathic origin, like the patient of the case2. In the pediatric population, 90% are of idiopathic origin³.

The most reported symptom in the adult population is abdominal pain in 71 to 100% of older adult patients. The presence of rectal bleeding or melena occurs in 2 to 4% and often indicates a probable malignant origin. The literature shows a case of intestinal invagination in an adult patient accompanied by lower gastrointestinal bleeding in a patient with a choriocarcinoma in the jejunum. Despite being common in the pediatric population, in only 10% of older adults it is possible to palpate a mass in the abdominal region^{2,4,5}.

Although the diagnosis can be made through imaging studies such as ultrasound or computed axial tomography, only a third of patients are diagnosed preoperative, the majority are diagnosed during surgery. This entity represents 1% of obstructive pathologies at the intestinal level in the adult patient^{2,3,6}.

The most used treatment is segment resection and anastomosis of the viable segments, due to the high percentage of malignant lesions. However, the attempt to reduce the invagination cannot be ruled out, since it may facilitate exposure for the subsequent resection. Some authors recommend not reducing the defect, justifying the risk of tumor embolism, perforation, and contamination of the cavity. No description of a wide resection of the mesentery was found in the literature^{2,3,6}. The mortality of this condition varies according to its etiology, since in benign conditions it is reported to be 8% and 52% in malignant lesions^{7,8}.

Conclusion

Due to the underdiagnosis, the non-specific clinical symptomatology and the low frequency, the ideal treatment or the option of non-surgical management is not feasible in acute abdominal conditions. Preoperative diagnosis is a challenge for the surgeon.

References

1. Morera, Hernández, Bernal. Intestinal intussusception in adults: a case report and review of the Spanish medical literature. *Cirugía Española*, Volume 86, Issue 6, 2009, Pages 358-362, <https://doi.org/10.1016/j.ciresp.2009.08.002>.
2. Palomeque, A., Muffak, K., Manuel Ramia, J., Mansilla, A., García-Navarro, A., & Antonio Ferrón, J. (2005). Gastrointestinal hemorrhage and intestinal intussusception due to intestinal choriocarcinoma. *Spanish Surgery*, 78(1), 59. doi:10.1016/s0009-739x(05)70888-5
3. R. Franco-Herrera, M. Burneo-Esteves, J. Martín-Gil, A. Fabregues-Olea, D. Pérez-Díaz, F. Turégano-Fuentes. Intussusception in adults. An uncommon cause of mechanical obstruction, *Journal of Gastroenterology of Mexico*, Volume 77, Issue 3, 2012, Pages 153-156, ISSN 0375-0906, doi.org/10.1016/j.rgmx.2012.04.007 .
4. JG Martín, JL Aguayo, J. Aguilar, JA Torralba, R. Liron, J. Miguel, E. Girela, M. Corral. Intestinal invagination in adults. Presentation of seven cases with emphasis on preoperative diagnosis, *Cirugía Española*, Volume 70, Issue 2, 2001, Pages 93-97, ISSN 0009-739X, doi.org/10.1016/S0009-739X(01)71852-0 .
5. Alarcón-Jarsún G. A, Martínez-Ordaz J. L, de la Fuente-Lira M, , Blanco-Benavides R. Intestinal intussusception in adults. *Surgery and Surgeons* [Internet]. 2005;73(1):43-46. Retrieved from: <https://www.redalyc.org/articulo.oa?id=66273109>
6. Rios-Cruz D, Ramirez-Morales F, Lopez-Pretelin N. P, Quiroz-Morales C. N, , Bezares-Bravo G. Intestinal intussusception: a diagnostic dilemma in adults. Report of two cases and review of the literature. *Surgery and Surgeons* [Internet]. 2014;82(4):436-441. Retrieved from: <https://www.redalyc.org/articulo.oa?id=66231427012>
7. Azar T, Berger DL. Adult intussusception. *Ann Surg* 1997;226(2):134-138.
8. Hong, K.D., Kim, J., Ji, W., & Wexner, S.D. (2019). Adult intussusception: a systematic review and meta-analysis. *Techniques in Coloproctology*. doi:10.1007/s10151-019-01980-5