

CASE REPORT

Hyperplastic Polyp of the Ileum Causing Intestinal Intussusception

Bağırsak Intususepsiyonuna Neden Olan Ileumun Hiperplastik Polibi

 Tolga Kalaycı,  Murat Kartal

Department of General Surgery, Erzurum Regional Training and Research Hospital, Erzurum, Türkiye

Abstract

In this study, the management of an adult patient with a mechanical small bowel obstruction caused by intussusception due to hyperplastic polyp is presented. A 25-year-old man presents to the emergency department for abdominal pain accompanied by nausea and vomiting. In the abdominal examination, the patient had sensitivity in all abdominal quadrants. Contrast-enhanced abdominal computed tomography (CT) showed enlargement of the intestinal loops, air-fluid levels, and intertwined intestinal segments in the pelvic region. On exploration with a midline incision, it was observed that the 40-cm ileal segment, starting 70 cm proximal to the ileocecal valve, was invaginated into the distal ileal segment with its mesentery. After 40 cm ileal resection, bowel reconstruction was performed with a side-to-side anastomosis with a linear stapler. The patient was discharged on the seventh postoperative day without any complications. In the histopathological evaluation of the resection material, there was a hyperplastic polyp measuring 20 × 15 mm. According to the pathology result, no additional intervention was considered for the patient.

Keywords: Hyperplastic polyp; Intestinal obstruction; Intussusception; Ileum

Intussusception is one of the rare mechanical causes of intestinal obstructions in adults.^[1] Intussusception occurs when a segment in the gastrointestinal tract enters the lumen of the continuation segment together with the mesentery. Although it is frequently encountered in childhood, it can also be seen in adults, albeit rarely. It is responsible for less than 1% of mechanical intestinal obstructions in adults.^[2] It is thought to develop secondary to peristaltic disorders or intraluminal pathologies. It may present with symptoms secondary to abdominal pain, rectal bleeding, and obstruction.^[3]

In this study, the management of an adult patient with a mechanical small bowel obstruction caused by intussusception due to hyperplastic polyp is presented.

Case Report

A 25-year-old man presents to the emergency department for abdominal pain accompanied by nausea and vomiting. From anamnesis, we found that this is the second episode of abdominal pain this month, but the previous one was insignificant compared with the present. The pain, which started around the umbilicus 24 h before the emergency

Cite this article as: Kalaycı T, Kartal M. Hyperplastic Polyp of the Ileum Causing Intestinal Intussusception. Lokman Hekim Health Sci 2022;2(2):74–76.

Correspondence: Tolga Kalaycı, M.D. Erzurum Bölge Eğitim ve Araştırma Hastanesi, Genel Cerrahi Kliniği, Erzurum, Türkiye
E-mail: dr.tolgakalayci@gmail.com **Submitted:** 15.02.2022 **Accepted:** 19.04.2022

OPEN ACCESS This is an open access article under the CC BY-NC license (<http://creativecommons.org/licenses/by-nc/4.0/>).



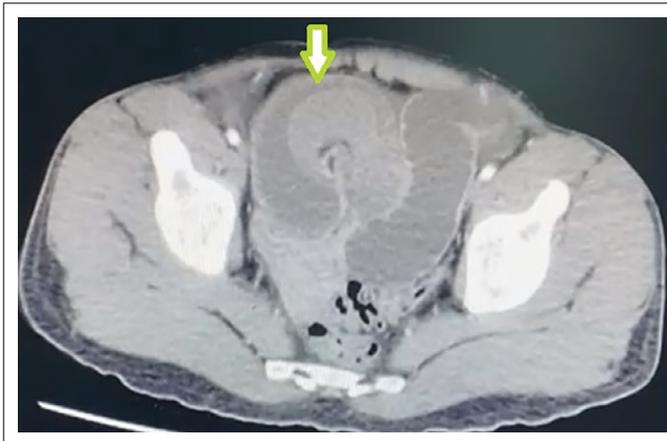


Figure 1. Intertwined and dilated intestinal segments in the pelvic region on CT scan (shown by an arrow).

admission, spread to the whole abdomen as time passed. He stated that all abdominal pain attacks occurred after regular meals and were not affected by defecation. There was no additional disease, operation, cigarette, alcohol, and drug use history in the medical history of the patient.

At physical examination, the patient had a mild tachycardia with a pulse rate of 110 beats/min, and arterial pressure of the patient was 115/65 mmHg in the normal value range. In the abdominal physical examination, the patient had maximum sensitivity in all abdominal quadrants and a slightly swollen abdomen. Abdominal sounds have partially decreased. Digital rectal examination was normal and so was the clinical evaluation of other systems.

Blood samples showed only a mild leukocytosis ($12\,000\ \mu\text{L}^{-1}$). Other laboratory parameters were normal. Air-fluid levels were present on the abdominal X-ray. Contrast-enhanced abdominal CT showed enlargement of the intestinal loops, air-fluid levels, and intertwined intestinal segments in the pelvic region (Fig. 1). Urgent surgery was planned with the prediagnosis of mechanical small bowel obstruction secondary to intussusception. Diagnostic laparotomy was performed with a midline incision. On exploration, it was observed that the 40-cm ileal segment, starting 70 cm proximal to the ileocecal valve, was invaginated into the distal ileal segment with its mesentery. No other additional intraabdominal pathology was found. Most of the invaginated segment was squeezed to prevent reduction and had a necrotic appearance in some segments (Fig. 2, 3). After 40 cm ileal resection, bowel reconstruction was performed with a side-to-side anastomosis with a linear stapler. A drain was placed in the pelvic cavity. Postoperative follow-up of the patient was performed in the service. Oral feeding was started on the postoperative second day, and the drain was

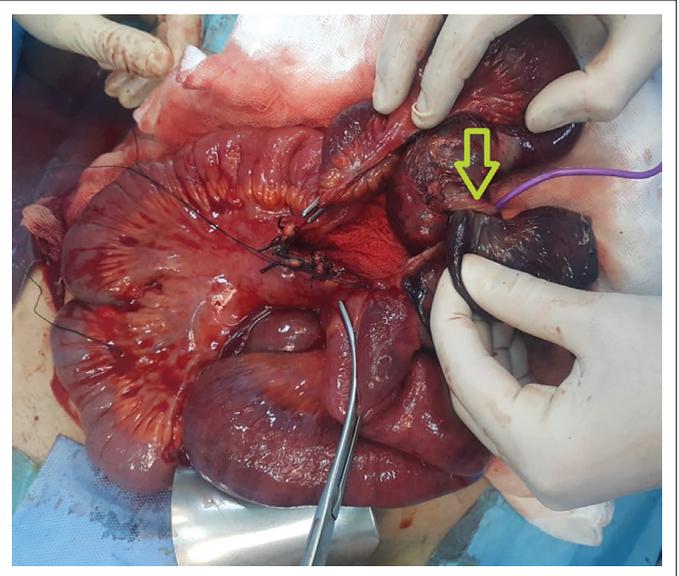


Figure 2. Intussusception of intestinal segments (shown by an arrow).

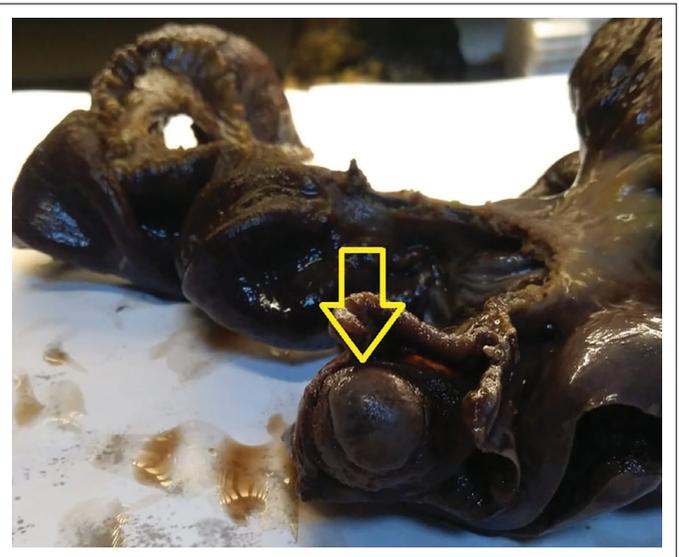


Figure 3. Hyperplastic polyp causing intestinal intussusception (shown by an arrow).

removed on the fifth day. The patient was discharged on the seventh postoperative day without any complications. In the histopathological evaluation of the resection material, there was a serrated hyperplastic polyp measuring 20×15 mm. The lesion was 25 mm from the proximal surgical margin. According to the pathology result, no additional intervention was considered for the patient.

Discussion

Intestinal obstruction is a mechanical or functional obstruction of the intestines, which prevents the normal movement of the products of digestion. Causes of intestinal obstruction

include adhesions, hernias, volvulus, tumors, diverticulitis, tuberculosis, ischemic bowel, gallstones, and intussusception.^[4]

In the presented case, intussusception, a rare cause of intestinal obstruction, is discussed. Although a high rate of intussusception is seen in pediatric patients, 5% of the cases are in adults.^[2] Intussusception is named according to the segments in which it occurs: gastroduodenal, enteroenteric, ileocecal, ileocolic, or colocolic. The most common intussusception cases in adult patients are enteroenteric cases; the presented case is an enteroenteric intussusception case.^[5]

While pediatric cases usually present with acute findings, clinical findings in adult patients are generally chronic, and most patients have nonspecific abdominal pain complaints. The diagnosis is a difficult process with preoperative methods, and the diagnosis is often confirmed by laparotomy. In studies, the preoperative diagnosis rate in intussusception in adult patients reaches up to 50%.^[6] Laboratory tests are mostly nonspecific and may vary depending on the presence of obstructive complications. In the laboratory tests of the presented case, no pathology was found except mild leukocytosis.

The first imaging tool is a direct X-ray radiograph. The presence of air-fluid level on X-ray radiography and the absence of colonic gas suggest small bowel obstruction. CT as an advanced examination can give an idea about the etiology. The appearance of intussusception on CT is characteristic and depends on the imaging plane and where along the bowel the images are obtained. At the proximal end of the intussusception, there will be two concentric enhancing/hyperdense rings, formed by the inner bowel and the folded edge of the outer bowel.^[7] Although the “target sign” image suggests intussusception, these findings may not be encountered in all patients. In this case, intussusception was considered in the tomography scanning used in the preoperative period.

While enteroenteric intussusception often develops secondary to benign pathologies, malignant pathologies are more prominent in the development of ileocolic and colocolic intussusception.^[5] The incidence of polyps in adult intussusception cases is around 20%. The most common type of polyp is the hyperplastic polyp.^[6]

Surgical intervention is recommended in the treatment of intussusception in adult patients due to the frequency of concomitant anatomical and functional structural anomalies, the high risk of recurrence after conservative treatment, and the incidence of concomitant malignancies.^[8] Resection of the pathological segment is the most common surgical method. The size of the intestinal segment

with impaired blood supply is an important criterion in the decision of the width of the resection. In cases with suspected malignancy, wide resection may be required in line with oncology principles.^[9]

Conclusion

The diagnosis of intussusception should be considered in patients with recurrent episodes of abdominal pain accompanied by nausea and vomiting. Although the contribution of laboratory methods to the diagnosis is limited in the preoperative period, it is possible to make a diagnosis with imaging methods in half of the cases. The main surgical purpose is to remove the pathological segment, both in cases with suspected intussusception in the preoperative period and in cases encountered intraoperatively.

Peer-review: Externally peer-reviewed.

Informed Consent: Written informed consent was obtained from patients who participated in this study.

Authorship Contributions: Concept: TK, MK; Design: TK, MK; Supervision: TK, MK; Funding: TK, MK; Materials: TK, MK; Data Collection or Processing: TK, MK; Analysis or Interpretation: TK, MK; Literature Search: TK, MK; Writing: TK, MK; Critical Review: TK, MK.

Conflict of Interest: None declared.

Financial Disclosure: The authors declared that this study received no financial support.

References

1. Bratu MR, Balmes B, Diaconescu BI, Beuran M. A rare case of intestinal obstruction in an elderly woman. *Chirurgia (Bucur)* 2018;113(4):571–5. [\[CrossRef\]](#)
2. Marinis A, Yiallourou A, Samanides L, Dafnios N, Anastasopoulos G, Vassiliou I, et al. Intussusception of the bowel in adults: a review. *World J Gastroenterol* 2009;15(4):407–11. [\[CrossRef\]](#)
3. Baleato-González S, Vilanova JC, García-Figueiras R, Juez IB, Martínez de Alegría A. Intussusception in adults: what radiologists should know. *Emerg Radiol* 2012;19(2):89–101. [\[CrossRef\]](#)
4. Gore RM, Silvers RI, Thakrar KH, Wenzke DR, Mehta UK, Newmark GM, et al. Bowel Obstruction. *Radiol Clin North Am* 2015;53(6):1225–40. [\[CrossRef\]](#)
5. Lu T, Chng YM. Adult intussusception. *Perm J* 2015;19(1):79–81.
6. Gupta RK, Agrawal CS, Yadav R, Bajracharya A, Sah PL. Intussusception in adults: institutional review. *Int J Surg* 2011;9(1):91–5. [\[CrossRef\]](#)
7. Choi SH, Han JK, Kim SH, Lee JM, Lee KH, Kim YJ, et al. Intussusception in adults: from stomach to rectum. *AJR Am J Roentgenol* 2004;183(3):691–8. [\[CrossRef\]](#)
8. Ahmet Deniz U. Intussusception/Invagination. *Turkiye Klinikleri J Gen Surg-Special Topics* 2014;7(2):109–14.
9. Bowker B, Rascati S. Intussusception. *JAAPA* 2018;31(1):48–49.