

Intestinal Intussusception Seen in Adult Patients: Case Report

Erişkinde Görülen İleoileal İnvajinasyon: Olgu Sunumu

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Öz

Bağırsak intusepsiyonları genellikle çocukluk çağında görülen mekanik bağırsak obstrüksiyonu sebeplerinden birisidir. İnvajinasyonların yaklaşık %1-5 i erişkinlerde görülmektedir. Çocukluk çağında görülen vakaların %90 ı idiyopatik iken, erişkin intusepsiyonlarında % 90 altta yatan organik bir lezyon bulunmaktadır. Etiyolojiye bağlı olarak da tedavi değişmektedir. Sunacağımız 2 olgu aracılığı ile erişkinde görülen intusepsiyon vakaları hakkında bilgi vermeyi amaçladık.

Anahtar Kelimeler: İntusepsiyon, ince bağırsak, polip

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Abstract

Intestinal intussusceptions are one of the causes of mechanical intestinal obstruction usually seen in childhood. Approximately 1-5% of invaginations seen in adults. While 90% of childhood cases are idiopathic, 90% of adult intussusceptions have an underlying organic lesion. We aimed to give information about intussusception cases in adults with 2 cases we present.

Keywords: Intussusception, ileum, polyp

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INTRODUCTION

Intussusception is the invagination of the proximal bowel segment into the adjacent distal segment. It was first described by Barbette in 1674 (1). Known as a childhood disease. However, 1-5% of all intussusceptions are seen in the adult population. The rate of incidence in men and women is similar in adults (2). Ileocolic intussusceptions are mostly seen in childhood. Most of them can be treated with non-surgical reduction procedure. Adult intussusceptions are usually seen in the small bowel and 70-90% has an underlying cause. Therefore, the probability of clinical recovery without surgical intervention is low (3). Causes of adult intussusceptions include benign and malignant tumors, adhesions, inflammatory causes, Meckel's diverticulum, and congenital malformations. Definitive diagnosis is made by pathological examination of the postoperative piece. Nevertheless, radiological scans done in the preoperative period are helpful in making the diagnosis. In our case report, we aimed to discuss the diagnosis and treatment of adult intussusceptions with 2 patients.

CASE

Our first case, a 50-year-old male patient, presented to the emergency department due to increased abdominal pain lasting for 3 days. There were complaints of nausea and vomiting with abdominal pain. There were no features in his CV and family history. On physical examination, there was tenderness in the paraumbilical region. Leukocytosis and high C-reactive protein (CRP) was detected in laboratory values. No pathology was seen in the plain abdominal X-ray. In abdominal ultrasonography (USG), an appearance compatible with gato intestinal loops was observed in the paraumbilical region. Abdominal computed tomography (CT) scan was done for the patient due to suspicion of intussusception. In CT scan an area that may be intussusception in the ileal loops was observed (Figure 1). Urgent operation was planned. In the exploration, 20 cm ileal loop invagination was seen at approximately 110 cm proximal from Treitz ligament. Because of intestinal ischemic and micro perforation foci resection decision was made. Resection and end-to-end anastomosis was done (Figure 2). The patient was discharged on the 5th postoperative day with surgical recovery. The pathological evaluation showed that intussusception came up due to a juvenile polyp in the ileal loop.

The second case is a 24-year-old female patient who applied to the emergency department with

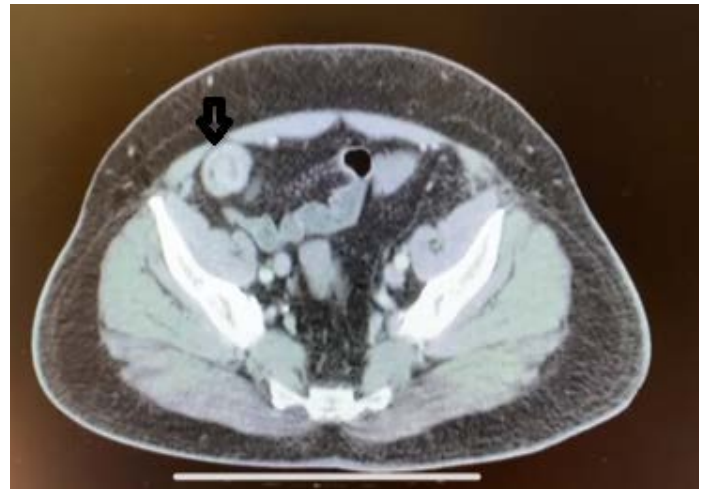


Figure 1. Image of intussusception due to juvenile polyp on tomography

abdominal pain, nausea and vomiting. In addition, she had constipation for 2 days. Her history was unremarkable except for mental retardation. On physical examination, there was distention and tenderness in the abdomen. Leukocytosis and CRP elevation were present. CT scan was done due to air-fluid levels in plain abdominal x-ray. Computed tomography showed an appearance compatible with intussusception at the level of the distal ileal loops and dilatation in the proximal intestinal loops. Urgent exploration decision was made. In the exploration,



Figure 2. Ileoileal intussusception resection material



Figure 3. Ileal intussusception seen in exploration

there was invagination in the ileal loops approximately 80 cm proximal to the ileocecal valve (Figure 3). When the invaginated part of the ileum was opened a 5 cm ileal ans with an inverted lesion? polyp? was seen (Figure 4). Because of the possibility of an inverted malign lesion and the ischemic areas in the ileum resection and anastomosis decision was made. No complications occurred peroperatively. The patient was discharged with surgical recovery in the postoperative period. Pathological evaluation of the specimen revealed an inverted Meckel's diverticulum in the ileum.



Figure 4. Suspected area of polyp or mass on ileum

DISCUSSION

Intestinal intussusceptions are frequently seen in childhood. It was first described by Barbette in 1674 as the invagination of the proximal part of the intestine into the distal part of the adjacent intestine (1). In 1789, John Hunter defined 3 more such patients and used the term "intussusception" (4). Sir Jonathan Hutchinson, on the other hand, first described the process of reduction of intussusception in 1871 (5). Adult intussusceptions are a rare condition. The underlying mechanism is not clear. However, it is thought that the presence of a mass or inflammation that may cause irritation in the lumen or its wall may cause intussusception by affecting the peristaltic activity (6). While there is no underlying cause in 90% of childhood intussusceptions, approximately 90% of adult intussusceptions develop due to a lesion. For this reason, the reduction procedure done in childhood intussusceptions gives more results. Causes of adult intussusceptions include benign and malignant lesions, postoperative adhesions, vascular malformations, anatomical variations, intestinal ulcers, and idiopathic conditions. About two-thirds of cases are caused by benign and malignant lesions. In a literature review covering 1214 patients, it was observed that 63% of adult intussusceptions were due to tumoral lesions and 50% of this was malignant lesions. Intussusception is more common at the small intestine level in adults. It has been determined that 48% of colonic intussusceptions are due to malignant masses, and 17% of small intestinal intussusceptions are malignant. In addition, while most of the lesions detected in the colon are primary malignancies, most of the small intestinal malignant masses are metastatic masses (7).

Abdominal pain is the most common symptom of intussusception in adults. In addition, loss of appetite, nausea, vomiting, gastrointestinal bleeding may also occur. Diarrhea may also occur if necrosis due to intussusception is present. On physical examination, decreased bowel sounds, abdominal distension according to the level of intussusception, and if perforation has developed, diffuse abdominal tenderness, defense, rebound may be seen (8). One of our patients had distension due to distal obstruction, and the other one had tenderness due to perforation.

Diagnosis of bowel intussusception is easier in children than adults. Target sign seen in abdominal USG in children is diagnostic with symptoms. In addition, in the treatment, there are rates of up to 80% of hydrostatic reduction done with USG in appropriate

cases (9). In adults, findings related to intestinal obstruction can be detected by direct radiography and ultrasonography. However, contrast-enhanced abdominal CT will give clearer information about the etiology (10). Both of our patients had CT scan to search the etiology.

Adult intussusceptions can be classified into 4 groups according to the region of origin: Enteric, ileocolic, ileocecal and colonic. Enteric ones are only in the small intestine, colonic ones are only in the colon. It is difficult to distinguish between ileocolic and ileocecal intussusceptions. In the ileocolic type, the small intestine passes through the ileocecal valve and invaginates to the colon. In ileocecal intussusception, the ileocecal valve can not be passed (11). Enteric intussusception was present in the 2 patients we presented.

Treatment varies according to the patient and clinical characteristics. Hydrostatic reduction is often beneficial, as the cause is idiopathic in 90% of children with symptoms not exceeding 3 days. However, surgery should be considered in patients with unsuccessful reduction and acute abdomen findings in the first evaluation. Reduction is not the first choice, as there is an underlying mass cause in approximately 90% of intussusception in the adult population. It is stated that peroperative reduction in adults may cause iatrogenic injury, and if there is an underlying malignancy, implantation into the abdomen is therefore not recommended. However, it is stated in the literature that if there is no perforation and necrosis, large bowel resection can be prevented by the reduction procedure and time can be gained for malignancy surgery (3,12,13,14).

Benign lesions that cause intestinal intussusception include lipomas, leiomyomas, hemangiomas, Meckel's diverticulum, and polyps. One of the patients presented in our case was due to Meckel's diverticulum and the other was small bowel intussusception due to inflammatory polyp.

Meckel's diverticulum is the most common congenital malformation of the gastrointestinal tract. It occurs as a result of failure of the omphalomesenteric duct to close. It is found in 1-3%. It is a true diverticulum containing all layers of the intestinal wall. The incidence in men and women is equal. The clinical presentation of Meckel's diverticulum varies. Clinical symptoms and presentation can be chronic abdominal pain, bleeding, intestinal obstruction, perforation and diverticulitis (15,16). In our patient, small bowel intussusception due to Meckel's diverticulum and

therefore mechanical intestinal obstruction developed. It is debatable whether resection should be performed in case of every bowel intussusceptions. However, if the cause is Meckel's diverticulum, it can be said that resection will be the definitive treatment method (17).

Intussusceptions develop from juvenile polyps are rare. The most common type of polyp in the pediatric age group is isolated juvenile polyp. Juvenile polyps are generally observed in the large intestine and most frequently in the 2-5 age group (18). Adult intussusceptions due to juvenile polyps are less common than in the pediatric age group. In one of the patients we presented, intussusception due to a juvenile polyp was present. The patient underwent segmental small bowel resection and anastomosis.

In conclusion, intestinal intussusceptions are rare disorders in the adult population. It is not easy to diagnose because it can progress with more chronic symptoms compared to the pediatric age group. Computed tomography for diagnosis is the imaging method that can be most helpful in terms of etiology and differential diagnosis. About 90% of them have a pathology. For this reason, hydrostatic reduction, which is frequently used in children, is not the first treatment option in adults. Surgery comes to the fore in treatment. It should be kept in mind that intussusception may be the etiology of acute and chronic abdominal pain in adults.

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