

# Intussusception of the bowel in adults: two different cases

## Erişkinlerde barsak intussussepsiyonu: İki farklı vaka

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### ABSTRACT

Intussusception in adults is considered an unusual condition accounting for 5% of all cases of intussusceptions and almost 1%–5% of all cases of bowel obstruction. We present two cases of patients with a complaint of abdominal discomfort and concomitant vomiting who are 43 and 44 years old. Ileocecal intussusception was diagnosed by computed tomography. One patient underwent open whereas the other underwent laparoscopic right hemicolectomy and ileotransversostomy. A histopathological study revealed lipoma in the first case and adenocarcinoma in the second. We described the diagnosis and treatment of intestinal intussusception in adults.

**Keywords:** Adults, intussusception, diagnosis, treatment

### ÖZET

Yetişkinlerde bağırsak intussuspepsiyonu nadir görülür, tüm intussuspepsiyon vakalarının %5 ve bağırsak obstrüksiyonlarının %1-5'ini oluşturmaktadır. Bu yazıda, 43 ve 44 yaşında birkaç haftadır süren karın ağrısı ve bulantı şikayeti olan ik erkek hasta sunuldu. Bilgisayarlı tomografide ileoçekal intussuspepsiyon tanısı konuldu. Hastalardan birine açık ve diğerine laparoskopik sağ hemikolektomi ve ileotransversostomi yapıldı. Histopatolojik çalışmalarda bir hastada lipom ve diğerinde adenokarsinom görüldü. Erişkinlerde bağırsak intussuspepsiyonunun tanı ve tedavi açısından tarifini sunduk.

**Anahtar Kelimeler:** Yetişkin, intussuspepsiyon, tanı, tedavi

### INTRODUCTION

Intussusception is defined as invagination of an intestinal segment with its mesentery as a result of peristalsis into the intestinal lumen. In most cases, the causes of colic intussusception in adults are malignant disease, whereas the causes of small bowel intussusception are frequently benign (lipoma, polyps, adenomas, and Meckel's diverticulum) (1). It was first defined in 1674 by Barbette and Sir Jonathan Hutchinson was the first to operate on a child with intussusception in 1871 (2). Intestinal intussusception in adults is considered as an unusual pathology and represents 5% of the total cases of intestinal intussusception (children and adults) and 1%–5% of all cases of intestinal obstruction (3). Intussusceptions are classified along with their locations into four categories: enteroenteric, colocolic, ileocolic, and ileocecal (4).

Computed tomography (CT) is the most sensitive diagnostic method for intussusceptions. All researchers report that surgery is the most effective treatment for adult intussusceptions (5). We described the diagnosis and treatment of intestinal intussusception in adults.

### CASE PRESENTATIONS

#### Case 1

A 44-year-old man was admitted to the emergency department with three months history of intermittent lower right abdominal pain and nausea. He also had a history of obstipation and constipation. These symptoms worsened over the past three days. He had no operation history. There was no familial history of any disease. On physical examination, the abdomen was minimally distended and tender. In the right lower quadrant, an approximately 8 cm diameter mass was palpated with a deep palpation. The results of routine laboratory examinations were within the normal limit. The abdominal X-ray showed dilated loops of the small intestine, which was indicated as an obstructive pattern. After resuscitation, a CT scan was performed, which showed dilatation of small intestine because of ileocecal invagination. On exploratory laparotomy, an ileocecal intussusception was found (Figure 1). After manual reduction, a 6-cm diameter properly limited mass was palpated in the cecum (Figure 2). Right hemicolectomy and end-to-side ileotransversostomy were performed. The postoperative duration was uneventful, and he was discharged seven days after surgery. On the gross and histopathological examination of the resected cecum, a well delineated and 6.2 cm × 5.1 cm × 4.4 cm lipomatous neoplasm was detected.

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Figure 1. An ileocecal intussusception



Figure 2. Lipoma causing intussusception

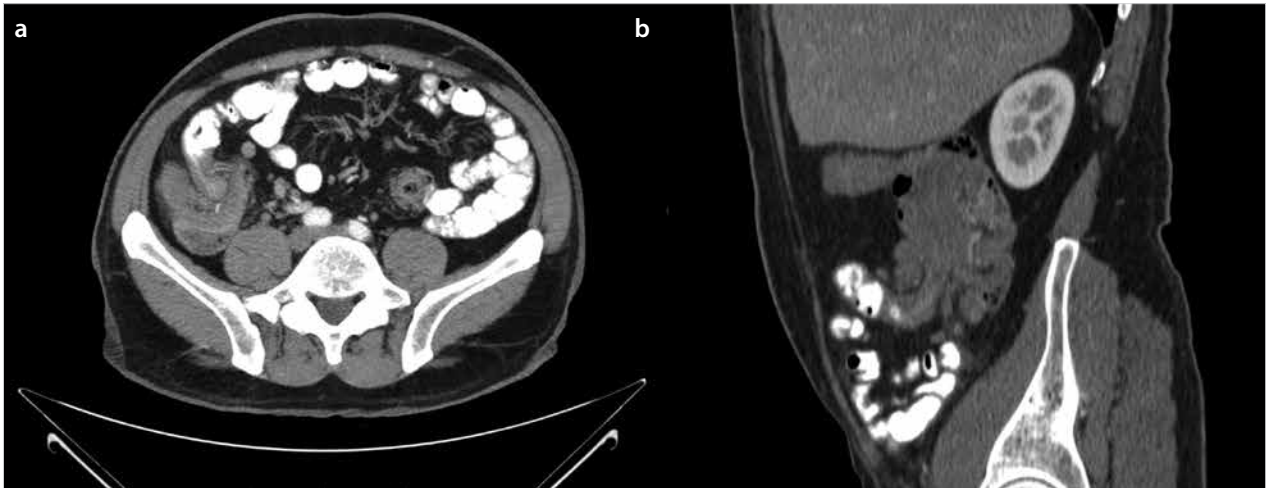


Figure 3. a, b. An ileocecal intussusception on computed tomography examination

## Case 2

A 43-year-old man was admitted to the general surgery clinic with a diagnosis of intussusception from a gastroenterology outpatient clinic. He had a history of obstipation, constipation, and intermittent right quadrant abdominal pain. There was no weight loss in the patient. The results of routine laboratory examinations were within the normal limit. The abdominal X-ray showed non-dilated loops of the small intestine. Abdominal CT revealed cecum distention and cecal wall thickening, which were suggestive of inflammation in the cecum wall and ileocecal invagination (Figure 3a, b). An intense hypodense appearance was observed in the lumen of the cecum. There was no evidence of complete obstruction in the patient, and colonoscopy was performed. An ulcerated mass in the lumen of the ascending colon and cecum was observed. A biopsy was taken. The biopsy confirmed the diagnosis of adenocarcinoma. Laparoscopic right hemicolectomy and ileotransversostomy was performed. The postoperative duration was uneventful, and he was discharged seven days after surgery. On the gross and histopathological examination of the resected cecum and ascending colon, a 6.5 cm × 4.8 cm × 2.2 cm tumoral lesion with irregular margins and four positive lymph nodes were detected. Mucinous adenocarcinoma was reported. The patient was classified as T3N2a (according to TNM classification stage 3 B) and adjuvant chemotherapy was administered.

## DISCUSSION

Abdominal distension and tenderness are common physical findings in intussusception. Abdominal mass, tenderness, and

hemoglobin positive stools are the classic triad of intussusception, but these are rarely found in adults. Blood loss or a palpable mass are present in a minority of the cases. Symptoms can be acute, intermittent, or chronic. In this study, the findings of intermittent obstruction were present in both cases. The clinical presentation in adult intussusceptions is often chronic, and most patients present with non-specific symptoms that are suggestive of intestinal obstruction. The symptoms in cases of adult intussusception are so non-specific that a clinical diagnosis beyond bowel obstruction is rarely made before surgery (6).

Obtaining the complete history and performing a physical examination are important. In the diagnosis of intussusception in adults, imaging modalities are essential. Although abdominal ultrasound and double-contrast radiographs could be used, abdominal CT is the most commonly used imaging modality because of the diagnostic appearance (7). On CT, intussusception appears as a "sausage-shaped" mass in the longitudinal axis and as a "target" mass in the transverse axis. Also, a thickened bowel wall with loss of facial plan and a reniform (pseudokidney) or thick-walled bilobulated image may be suggestive of vascular failure and helps in the decision of emergency surgery. Ischemic necrosis of the affected bowel segment is very important in selecting the optimal treatment decisions. Although it may be easily diagnosed with CT and magnetic resonance imaging, the primary reason is to reveal the condition of the intestines and the affected bowel segment (8).

Barbiera et al. (9) did not recommend hydrostatic reduction of intussusception because of the high likelihood of malignancy

in adults, and instead, they recommended laparotomy. Authors suggest that surgical resection without reduction should be the standard treatment in adults because approximately 50% of adult intussusceptions are associated with malignant lesions. Simple reduction is recommended only in idiopathic intussusceptions where no pathological underlying lesion is present (10). The choice of using a laparoscopic or open procedure depends on the clinical condition of the patient and, in particular, the experience of surgeon with laparoscopic procedures.

## CONCLUSION

In adults, intestinal intussusception represents a rare cause of intestinal obstruction. Clinical and paraclinical diagnostic methods used in intestinal intussusception contribute to act quickly and perform limited intestinal resections. Tumors of the terminal ileum, cecum, and ascending colon represent possible causes of progressive intestinal intussusception.

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