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CASE REPORT

Lipoma-Induced Jejunojejunal Intussusception in an Elderly Patient: an Unusual Case

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Abstract
Gastrointestinal system lipomas are most commonly seen in the colon (64%), and less than 2% are located in the jejunum. The cases of intussusception due to small bowel lipomas in the adults have been rarely reported. An 85-year-old female patient had a history of intermittent rectal bleeding for about 1 year. The patient underwent ultrasonography and computed tomography (CT) recommended for a suspected mass lesion with intussusception. CT revealed jejunal lipoma with jejunojejunal intussusception and intramural air densities at the outer wall of bowel. After the partial jejunectomy, the definitive histological examination confirmed the diagnosis of submucosal lipoma in the jejunum.

Keywords Small bowel · Lipoma · Adult · Intussusception

Introduction

Intussusception is a clinical condition characterized by the penetration of the proximal bowel segment into the distal segment [7]. Intussusception in adulthood constitutes 5% of all intussusception [8]. Unlike children, adults usually have an underlying malignant small bowel lesion as a fixation point for intussusception. Primary small bowel tumors are rare and constitute about 1% of all gastrointestinal tumors. Primary lipomas of the small intestine are also rare entities representing 2.6% of benign tumors of the intestinal tract [1]. Gastrointestinal system lipomas are most commonly seen in the colon (%64) and less than 2% are located in the jejunum [5]. The cases of intussusception secondary to small bowel lipomas in the adult patient group have been rarely reported previously. In this study, we will discuss the case of jejunojejunal intussusception induced by intraluminal lipoma located in the jejunum.

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Case

An 85-year-old female patient presented to our clinic with sudden onset severe abdominal pain and vomiting. The patient had a history of intermittent rectal bleeding for about 1 year. She had several episodes of hospitalization for the same presentation which were treated conservatively by nasogastric tube. Clinical examination revealed widespread abdominal tenderness and defense with normal hematological markers. Abdominal ultrasonography revealed dilatation in the bowel loops and a long segment target-like appearance consistent with intussusception. Contrast-enhanced abdominal computed tomography (CT) was recommended due to suspected hyperechogenic appearance consistent with the mass bowel lumen following the invaginal bowel segment. Contrast-enhanced abdominal CT revealed an approximately 10 cm jejunal intussusception at 30 cm distal to the Treitz ligament with intramural air densities at the outer wall of the bowel (Fig. 1a). CT also revealed 4 × 3-cm-diameter lipoma at distal part of intussusception following the invaginated bowel segment (Figs. 1b and 2a). The patient was suspected to have intestinal ischemia due to intussusception and underwent emergency surgery. In the operation, an approximately 12-cm jejunal intussusception was detected at 30 cm distal to the Treitz ligament. Surgery also revealed a 4-cm polypoid mass and necrosis in the invaginated jejunal loops. After that, partial jejunectomy and accompanying mass resection were performed (Fig. 2b). The definitive histological examination

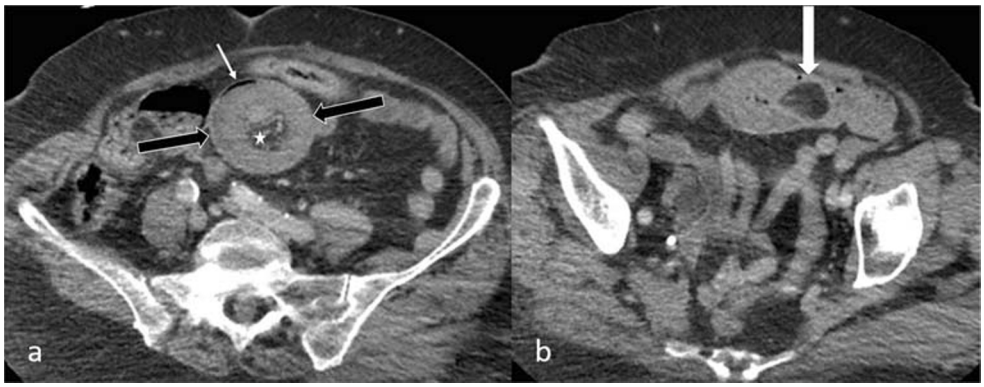

Fig. 1 Jejunojejunal intussusception in an 84-year-old female patient. **a** Axial contrast-enhanced CT scan image demonstrates target-like view and bowel wall edema (*black arrow*), intramural gas (*white arrow*), and invaginated mesenteric fat and vessels (*star*). **b** Axial contrast-enhanced CT scan image demonstrates an intraluminal mass with fat attenuation (*white arrow*) following the invaginal bowel segment

confirmed the diagnosis of submucosal lipoma in the jejunum. The postoperative period was uneventful and the patient was discharged from hospital on the seventh postoperative day.

Discussion and Conclusion

Approximately 90–95% of intestinal lipomas are submucosal and the remaining 5–10% is subserosal [3]. Lipomas can now be easily diagnosed with CT. The density obtained between (− 80) and (− 120) Hounsfield Unit (HU) from a homogeneous mass is almost pathognomonic in terms of lipoma [4]. The clinical presentation of intestinal lipomas is usually asymptomatic, and the patients are diagnosed incidentally. In particular, lipomas larger than 2 cm may cause abdominal pain, diarrhea, intussusception, constipation, or gastrointestinal bleeding [3, 4].

Intussusception is rare in adults and accounts for 1% of bowel obstructions. The annual incidence of adult intussusception is between 2 and 30 per 100,000 and is very rare [2]. In the past, intussusception was usually diagnosed by the surgeon during the operation, but with the frequent use of radiological imaging methods, preoperative diagnosis can be made easily. Diagnostically, both ultrasound and CT show a typical target-like appearance caused by invaginated bowel loops.

Unlike children, adult cases of intussusception have underlying abnormalities in 70–90% of patients, of which 20–50% is malignant lesions [2].

Benign conditions that lead to small intestinal intussusception include polyps, diverticular diseases, and rarely lipomas. Lipomas constitute only 1–2% of all gastrointestinal tumors and are most commonly seen in the colon, followed by the small intestine and sometimes in the stomach [6].

Since lipomas are usually submucosal, they are expected to be seen as intraluminal localized, uniformly circumscribed, homogeneous, and low-density lesions on CT. As it was seen in our case, it was easily diagnosed preoperatively and confirmed by definitive histopathological evaluation. Although these cases are rare, recommendations are usually directed to bowel resection including the mass, since adulthood can lead

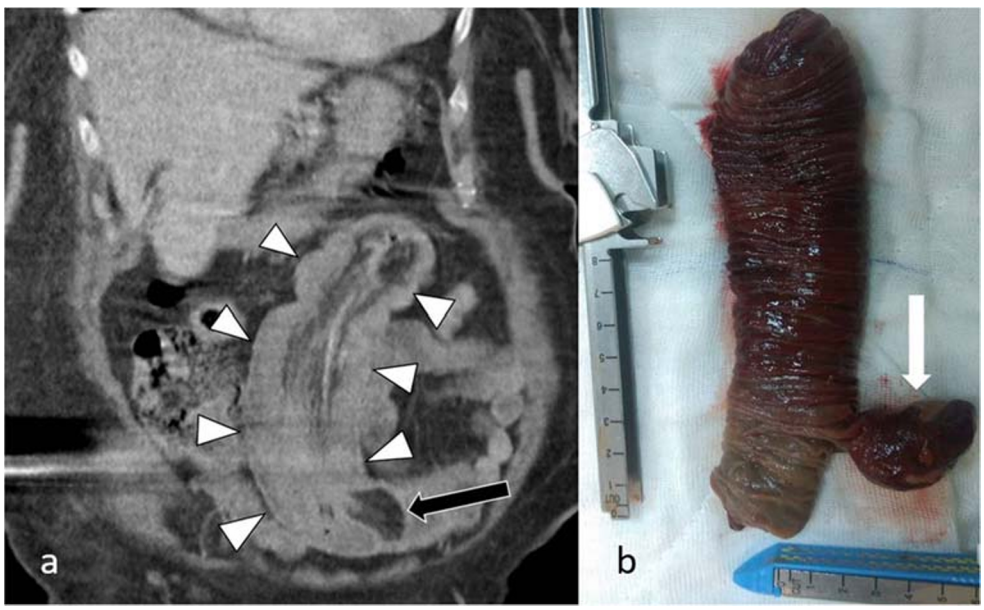

Fig. 2 **a** Coronal contrast-enhanced CT scan image demonstrates a long jejunojejunal intussusception (*arrow heads*) and intraluminal mass with fat attenuation (*black arrow*) following the invaginated bowel segment. **b** Photograph of the gross specimen shows a long jejunojejunal intussusception and following pedunculated polypoid mass (*arrow*)

to ischemia and perforation if not treated timely [2]. We also performed bowel resection in our case. Ultrasound may be useful in cases of intussusception in adulthood, but contrast-enhanced CT is recommended especially for better evaluation of underlying causes and complications.

Author's Contribution E Bunyamin: data collection, manuscript editing. K Serkan: data collection.
T Ismail: manuscript writing, manuscript editing.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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