

Symptomatic intestinal lipomas requiring surgical interventions secondary to ileal intussusception and colonic obstruction: report of two cases

İleal intussusepsiyon ve kolonik tıkanma nedeni ile cerrahi girişim gerektiren semptomatik intestinal lipomlar: İki olgu sunumu

Koray ATİLA,¹ Cem TERZİ,¹ Funda OBUZ,² Tuğbahan YILMAZ,¹ Mehmet FÜZÜN¹

Lipomas are rare but well-recognized tumours of the small and large intestines. They usually arise from the submucosa and may occasionally protrude into the lumen, thus causing abdominal pain resulting from obstruction or intussusception or they may become evident through haemorrhage. Intestinal lipomas should be removed either endoscopically or surgically because they can cause severe symptoms and usually a tissue diagnosis is indicated in intestinal tumours to exclude a malignancy. We describe two cases of symptomatic intestinal lipoma and review some aspects of diagnosis and treatment.

Key Words: Colon; intussusception; lipoma; small bowel; obstruction.

Lipomlar ince ve kalın bağırsağın nadir görülen fakat iyi tanımlanmış tümörleridir. Genellikle submukozadan köken alırlar ve bazen lümeneye doğru protrüde olarak tıkanma veya intussusepsiyon ile karın ağrısına neden olabilirler ya da hemoraji ile ortaya çıkabilirler. İntestinal lipomlar şiddetli semptomlara yol açabilmesi ve intestinal tümörlerde genellikle malinite olasılığını ekarte etmek için doku örneği alınmasının endike olmasından dolayı endoskopik ya da cerrahi olarak çıkarılmalıdır. Bu yazıda semptomatik intestinal lipomu olan iki olgu tanısı ve tedavisi açısından tekrar gözden geçirilerek sunuldu.

Anahtar Sözcükler: Kolon; intussusepsiyon; lipom; ince bağırsak; tıkanıklık.

Lipomas may develop in virtually all organs. They are rare, but well-recognized tumours of the small and large intestines. Lipomas are more commonly seen in the large intestine than the small intestine and are more common in the right than in the left colon. They are submucosal tumours of adipose tissue; they may occasionally protrude into the lumen, thus cause severe symptoms.

We describe two cases of symptomatic intestinal lipoma and review some aspects of diagnosis and treatment.

CASE REPORTS

Case 1

A 47-year-old woman was admitted to the emergency department with a 2-day history of intermittent upper abdominal pain and nausea aggravated by eating. On questioning, she gave a history of chronic constipation but no history of haematemesis or melena, no past history of any previous operation or any serious illness. On physical examination there was a firm, mobile mass in size of 5x10 cm in the left

Departments of ¹General Surgery and ²Radiology, Medicine Faculty of Dokuz Eylül University, İzmir, Turkey.

Dokuz Eylül Üniversitesi Tıp Fakültesi, ¹Genel Cerrahi Anabilim Dalı, ²Radyoloji Anabilim Dalı, İzmir.

Correspondence (İletişim): Koray Atıla, M.D. Dokuz Eylül Üniversitesi Genel Cerrahi Anabilim Dalı, İnciraltı 35340 İzmir, Turkey.
Tel: +90 - 232 - 412 29 32 Fax (Faks): +90 - 232 - 277 26 66 e-mail (e-posta): katila@deu.edu.tr

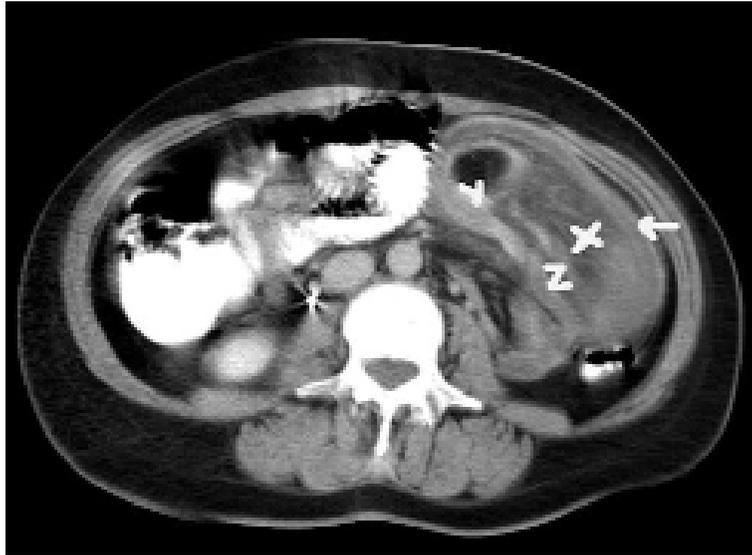


Fig. 1. CT scan showed classic bowel-in-bowel appearance of ileoileal intussusception by a lipoma (y). The inner central layer was formed by invaginated intussusceptum (x), the middle layer was formed by the mesenteric fat (z) and associated vasculature of invaginated intussusceptum, and the outer layer (→) was formed by the surrounding thick-walled intussusciens.

side of the upper abdomen with no abdominal distension and tenderness. Bowel sounds were increased. Examination of the other systems was normal. Plain X-ray abdomen was within normal limit. Abdominal ultrasound showed a typical “target mass” in the left side of the upper abdomen. In the longitudinal view, the “target mass” protruded into the jejunum. Possibilities of ileoileal intussusception and carcinoma of colon were entertained. Computerized tomography (CT) demonstrated clas-

sic bowel-in-bowel (target) appearance of an ileoileal intussusception along the left side of the upper abdomen, which was characterized by three concentric layers. The inner central layer was formed by invaginated intussusceptum, the middle layer was formed by the mesenteric fat and associated vasculature of invaginated intussusceptum and the outer layer was formed by the surrounding thick-walled intussusciens. A round mass of fat density representing the lipoma was found as the leading point of intussusception within the lumen of the intussusciens (Fig. 1).



Fig. 2. After the reduction of intussusception appearance of the lipoma arising from the lateral wall of ileum.

Results of other laboratory examinations were within normal limit. Stool for occult blood was positive. On exploratory laparotomy, an ileoileal intussusception was found at 15 cm proximal to the ileocaecal junction. After reducing the intussusception, a polypoid mass, arising from the wall of ileum measuring 5x5 cm was found forming the leading edge of the intussusception (Fig. 2). The affected segment of bowel 10 cm in length was resected with an end-to-end anastomosis. The macroscopic appearance was typical of a lipoma, which was confirmed histologically. The patient’s post-operative period was uneventful.

Case 2

A 56-year-old woman was admitted to the emergency department with complaints of acute abdominal cramping pain, nausea, and vomiting. Physical examination was within normal limits. An ultrasound study of the upper abdomen which was performed to detect biliary or renal pathology was negative. Colonoscopy demonstrated a submucosal mass too large for endoscopic removal. CT of the upper abdomen performed for planning surgical resection revealed a round mass within the lumen of the transverse colon; densitometric values were consistent with a homogeneous fatty lesion causing partial colonic obstruction (Fig. 3). The patient underwent an extended right hemicolectomy and pathological studies showed a well-defined, necrotic submucosal lipoma of the transverse colon, 5 cm in diameter. The patient's post-operative period was uneventful.

DISCUSSION

Both cases represent symptomatic intestinal lipomas requiring surgical intervention. Twenty to 25% of all digestive tract lipomas occur in the small intestine, being second in frequency to those of the colon, which constitute 65% to 75% of cases.^[1,2]

In a review by Ashley and Wells, most lipomas were ileal, then duodenal and the lowest percent was

found to be in the jejunum.^[3] Small intestinal lipomas are usually single submucosal intramural masses and they are multiple in about 10% to 15% of cases.^[4] Lipomas in the small intestine occur mainly in elderly patients. Although they may rarely undergo sarcomatous change, the event has never been convincingly documented.

A solitary case of a liposarcoma in the ileum has been described.^[5] Less than one-half of the patients who have intestinal lipomas become symptomatic, usually because of intussusception, obstruction or haemorrhage. The intussusception was reported to occur in 19% of a collected surgical series by Weinberg and Feldman.^[6] Other series have shown a higher incidence up to 40-65%.^[7,8] Severe bleeding may occur as to be in the form of haematemesis or melena. This is caused by superficial ulceration of the overlying mucosa.

The diagnosis of intussusception in our first patient was suggested by clinical features, ultrasonographic and CT examination. It has been reported that the leading point of intussusception cannot be easily demonstrated on CT although intussusception itself can be readily diagnosed.^[9] But we were able to demonstrate the intussusception as well as to have the radiologic diagnosis of a lipoma as the leading point of intussusception in Case 1. A submucosal lipoma can be diagnosed if a smooth well-circum-

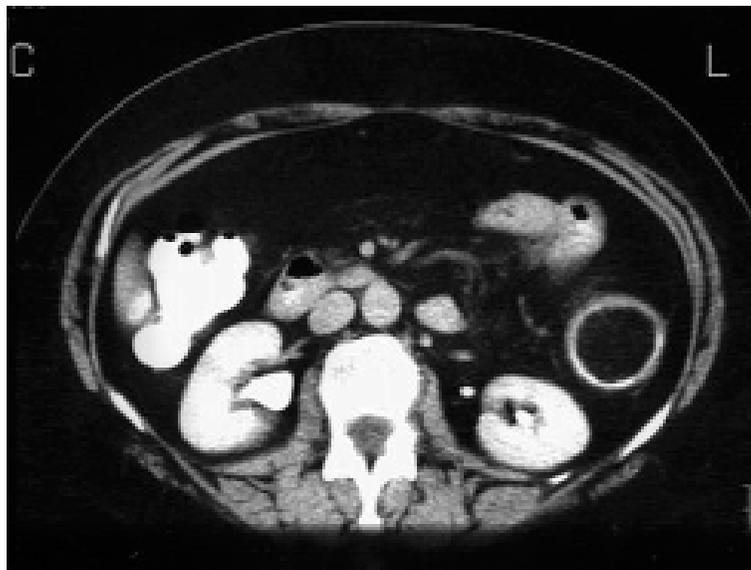


Fig. 3. CT scan of abdomen revealed a round mass within the lumen of the transverse colon; densitometric values were consistent with a homogeneous fatty lesion causing partial colonic obstruction.

scribed mass of fat density (-50 to -100 Hounsfield Units) is revealed within the lumen of the intussusciens. Surgical removal is required if the small intestine lipomas are symptomatic or to evaluate their histology particularly when liposarcomas must be ruled out. Lipomas of the large bowel are uncommon fatty neoplasms with a reported incidence ranging between 0.2% and 4.4%.^[10] In the Mayo Clinic series, 46% of large-bowel lipomas were discovered incidentally in specimens removed for other diseases. Of these, 11% were resected because of a neoplasm suspected of being a carcinoma and 6% were symptomatic.^[11]

The most common sites of lipomas in the large intestine are cecum, ascending colon and sigmoid colon in decreasing frequency; 70% are localized to the right hemicolon. Lipomas arise from the submucosa in approximately 90% of cases and from the subserosa and intermucosa in the remaining cases. Their sizes range from 2 mm to 30 cm. The majority of patients are between 40 and 70 years of age.^[12,13] Multiple lipomas are noted in 10%-20% of cases, particularly when a lipoma is found in the cecum. They can cause symptoms when size exceeds 2 cm including bleeding with anaemia, constipation, change in bowel habits, abdominal pain, intestinal obstruction and rarely intussusception. Bleeding occurs in 10% of all colonic lipomas and is usually insidious in nature. Preoperative diagnosis of colonic lipomas is difficult because they can be mistaken for benign or malignant colonic tumours and despite recent diagnostic innovation, preoperative diagnostic accuracy is only about 67%.^[14] Barium enema examination may show a spherical filling defect that is often radiolucent with well-defined margins. Both radiolucency and the "squeeze sign" (change in size and shape during peristalsis) have been considered pathognomonic for colonic lipomas.^[15]

CT has been proposed as a non-invasive method of diagnosis and it has been used successfully in our second patient. Lipomas appear spherical or ovoid with sharp margins and absorption densities of -40 to -120 HU typical of the fatty composition. However, surrounding soft tissue or stool may create an artificial increase in CT density values, which limits its accuracy. Therefore, in most cases, the histological diagnosis is arrived at only after the excision of the tumour.

Most colonic lipomas are discovered incidentally on colonoscopy and they may require surgical intervention due to suspicion of malignancy. Symptomatic lipomas can cause surgical emergencies such as intussusception, obstruction and very rarely massive haemorrhage. Because the majority of lipomas are submucosal, endoscopic removal entails a high risk. Colonoscopic polypectomy of a large lipoma should be avoided since its high water content requires a tremendous amount of heat to cut through the lipoma. Endoscopic removal is occasionally possible (especially if pediculated), but surgery should be the treatment of choice. Laparoscopic resection has recently been suggested as an alternative to laparotomy for selected colorectal lipomas.^[16] Thus, it is important to insist for an accurate diagnosis preoperatively in order to give to patients a chance for laparoscopic resection.

As a conclusion, intestinal lipomas should be removed either endoscopically or surgically because they can cause obstruction or haemorrhage and usually a tissue diagnosis is indicated in intestinal tumours to exclude the possibility of malignancy.

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