

Acute Intestinal Obstruction Due to a Lipoma: Case Report and Systematic Review of the Literature

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Abstract

Case Report

Adult intestinal intussusception is an uncommon clinical entity, accounting for less than 5% of all cases of bowel obstruction. We report the case of a 29-year-old man admitted with a 24-hour history of diffuse abdominal pain, cessation of bowel movements, and bilious vomiting. Physical examination and radiological investigations revealed that the patient was suffering from acute mechanical bowel obstruction due to ileo-ileal intussusception secondary to a lipoma. The patient underwent an initial laparoscopic exploration, followed by conversion to laparotomy. An ileal resection of 25 cm with side-to-side ileo-ileal anastomosis was performed. A systematic review of the literature (2012–2024) identified 155 reported cases of acute intestinal obstruction due to lipoma, 139 of which involved intussusception. Intestinal obstruction secondary to lipoma is rare and often presents as intussusception. Advances in imaging and endoscopy have improved preoperative diagnosis, but surgical resection remains the treatment of choice when bowel compromise or diagnostic uncertainty exists.

Keywords: intestinal obstruction, lipoma, intussusception, ileum, case report, Dreux.

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INTRODUCTION

Acute intestinal intussusception in adults is rare, accounting for approximately 5% of all cases of intestinal obstruction in this population. In more than 90% of cases, the aetiology is organic, and intussusception secondary to a lipoma is exceptional [1,2]. The clinical presentation is nonspecific but is dominated by symptoms of bowel obstruction. Therapeutic strategies vary depending on the location of the intussusception and the patient's overall condition [3]. In this report, we describe a case of acute intestinal obstruction caused by an ileo-ileal intussusception secondary to an ileal lipoma, followed by a systematic review of the literature from 2012 to 2024.

CASE PRESENTATION

M. O.G., a 29-year-old man, was admitted as an emergency for an intestinal obstruction syndrome that had been evolving for 24 hours. He presented with diffuse abdominal pain, cessation of bowel movements and flatus, and bilious vomiting alternating with brief symptom-free intervals. The patient had no relevant medical or surgical history, no digestive bleeding, and no identifiable triggering factor. Upon arrival, he was

afebrile and haemodynamically stable. His abdomen was mildly distended without any palpable mass. There was marked tenderness in the hypogastric region and the right iliac fossa, with slight diffuse abdominal sensitivity. Bowel sounds were present, and the hernial orifices were free. Digital rectal examination was unremarkable. Laboratory findings revealed a C-reactive protein (CRP) level of 18 mg/mL and a white blood cell count of 11,000/mm³. Electrolyte, liver, renal and coagulation profiles were within normal limits. An abdominal CT scan suggested the diagnosis of ileo-ileal intussusception, probably secondary to an ileal lipoma. The scan demonstrated the characteristic and pathognomonic 'target sign' (Figure 1). Given this clinical and radiological picture, surgical intervention was indicated. Under general anaesthesia, an initial laparoscopic approach was undertaken to explore the abdominal cavity. Exploration confirmed the presence of an ileo-ileal intussusception located 30 cm proximal to the ileocaecal junction, without evidence of bowel necrosis. There was significant proximal small-bowel distension, prompting conversion to a midline laparotomy. The patient underwent an ileal resection of approximately 25 cm with a side-to-side ileoileal anastomosis. Histopathological examination confirmed a

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4 cm submucosal lipoma of the ileum. Postoperative recovery was uneventful, with resumption of bowel function on postoperative day 2 and discharge on day 5.

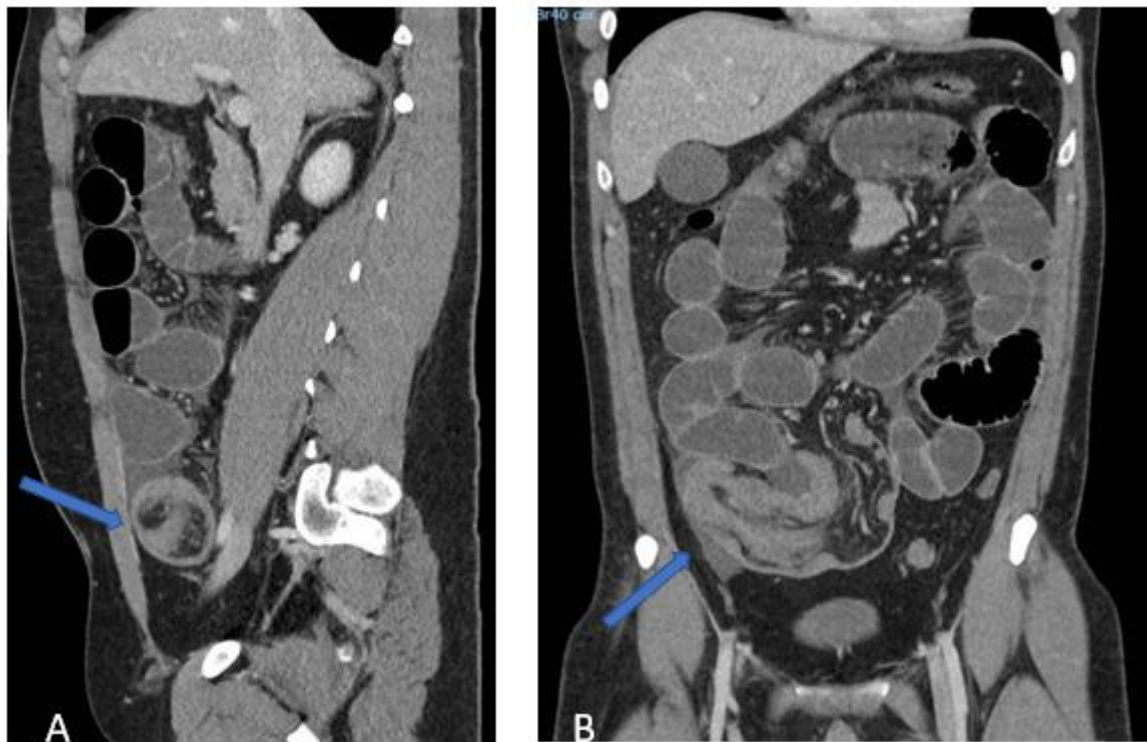


Figure 1: (A) axial and (B) coronal CT scans showing small bowel intussusception (arrows) with upstream small-bowel dilation

REVIEW OF LITERATURE

METHODS

An English medical literature search using PubMed, Google Scholar and Semantic Scholar was conducted for articles related to acute lipoma bowel obstruction between 2012 and 2024 inclusive. The keywords searched were: lipoma of the small intestine, lipoma of the colon, intussusception, intestinal obstruction. If data was missing, the corresponding authors of the articles in question were contacted by e-mail. Articles containing adequate information, such as year of publication, patient age, gender, symptoms, radiological tools, lipoma dimensions and surgical or endoscopic approach were included, while studies and commentary articles with insufficient clinical and demographic data and overlapping patients were excluded. For duplicate publications, the most recent and complete study was included. Information on the demographic characteristics of study subjects, patient symptoms and physical examinations, operative methods, lipoma dimensions and position were extracted from each study report and tabulated in Epi-info software.

RESULTS

A total of 155 cases of acute intestinal obstruction due to lipoma, including the present one,

were reported between 2012 and 2024. Among them, 139 involved intussusceptions, 14 were due to obstruction, and 2 were related to volvulus of the pelvic colon. Approximately 10 cases were published annually, mostly from Europe (36%). The mean patient age was 52 years (range: 20–90), with a nearly equal sex ratio. The lipoma was most frequently located in the colon (60.43%), followed by the ileum (27.34%), jejunum (9.35%), and duodenum (2.88%). In the colon, the lipoma was found in the transverse colon in 42% of cases, in the sigmoid in 21% of cases, in the cecum in 14% of cases, in the ascending colon in 13% of cases, in the descending colon in 6% of cases, and in one case in the rectum. CT scan confirmed the diagnosis in 93% of cases. Endoscopic treatment was attempted in 11 cases with success in 4. Surgical resection was required in most patients, with laparotomy as the first approach in 73% of cases, laparoscopy in 37 (27% conversion). The mean lipoma size was 5.3 cm (range: 2–11). Postoperative infection occurred in 2 patients; no mortality was reported. In obstructive occlusions, the lipoma was located in the colon in 9 out of 14 cases, and of these 9 cases, initial endoscopic treatment was performed in 6 cases and was successful in 5 cases.

DISCUSSION

Intussusception is an uncommon cause of acute intestinal obstruction in adults, representing less than 5%

of all intussusceptions and less than 1% of mechanical bowel obstructions [4,5]. Mouaqit *et al.* [6] reported 51 adult cases caused by lipoma between 2000 and 2011. The literature shows near equal sex distribution (ratio 0.93), with peak incidence in the fifth and sixth decades [3]. Unlike paediatric cases, benign or malignant tumours are the leading causes of adult intussusception. Lipomas may mimic malignant tumours [4,7], and they disturb intestinal peristalsis [8,9]. Clinical presentation is often vague: abdominal pain, nausea, diarrhoea, and rectal bleeding are common, while the paediatric triad is rare [6]. CT scan is the imaging method of choice for detecting lipomatous tumours [10] as it clearly shows fat-density lesions [2,11]. Management requires resuscitation and surgery [12]. Endoscopic or surgical resection may be chosen based on the site [11]. The size of the lipoma, its location, the nature of the base (pedunculated or sessile) and parietal extension are factors to be taken into account when discussing the two therapeutic modalities. Endoscopy helps confirm diagnosis and can reduce intussusception, avoiding unnecessary resection [2,13]. When malignancy cannot be excluded, surgery is mandatory. For jejunal or ileal lesions, surgery remains the best option, with segmental resection without prior reduction recommended since up to 50% involve malignancy [14,15]. Choice between laparoscopy or open surgery depends on clinical condition and surgical expertise.

CONCLUSION

Acute intestinal obstruction due to lipoma is rare, most often presenting as intussusception. Preoperative diagnosis is now more achievable through imaging and endoscopy. Endoscopic resection is considered for accessible lesions, whereas surgical resection is required when intestinal compromise or diagnostic doubt exists.

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