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Aymane Jbilou
Department of General Surgery, Mohammed VI University Hospital, Faculty of Medicine and Pharmacy, Abdelmalek Essaadi University, Tanger, Morocco

Younes Aggouri
Department of General Surgery, Mohammed VI University Hospital, Faculty of Medicine and Pharmacy, Abdelmalek Essaadi University, Tanger, Morocco

Anass Ahallat
Department of General Surgery, Mohammed VI University Hospital, Faculty of Medicine and Pharmacy, Abdelmalek Essaadi University, Tanger, Morocco

Said Aitlaalim
Department of General Surgery, Mohammed VI University Hospital, Faculty of Medicine and Pharmacy, Abdelmalek Essaadi University, Tanger, Morocco

Corresponding Author:
Aymane Jbilou
Department of General Surgery, Mohammed VI University Hospital, Faculty of Medicine and Pharmacy, Abdelmalek Essaadi University, Tanger, Morocco

Colorectal intussusception caused by a pedunculated lipoma: A rare case report

Aymane Jbilou, Younes Aggouri, Anass Ahallat and Said Aitlaalim

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Abstract
Intussusception is a rare condition in adults and can have various causes, including cancer. A man aged 35 presented to the emergency department with abdominal pain, abdominal distension, and rectal bleeding. A CT scan revealed that a lipoma in the recto-sigmoid region had caused the intussusception, resulting in a mechanical obstruction. To treat this, the intussusception was reduced, and part of the sigmoid was removed with an end colostomy. It is essential to consider the possibility of malignancy when managing adult intussusception as reducing a malignant segment may cause dissemination. While intussusception caused by non-malignant lesions such as lipomas is known to occur, it is more common in the right and transverse colons.

Keywords: Colorectal intussusception, colonic lipoma, surgery, case report, adult

Introduction
The description of colonic lipoma dates back to 1757 by Bauer [1], and it is the second most common benign tumor after adenomatous polyps. While it can serve as a lead point for intestinal invaginations, intussusception is a rare occurrence in adults, comprising less than 5% of all cases. Symptoms in adults usually present as bowel obstruction, as opposed to the classic triad of abdominal pain, bloody stool, and palpable mass. In childhood, the cause of intussusception is idiopathic in 90% of cases, but in adults, a pathological lesion can be found in 70-90% of cases [2]. This report presents a rare case of colorectal intussusception caused by a lipoma.

Case presentation
A male patient aged 35 visited the emergency room with complaints of severe abdominal pain, abnormal bowel movements, bleeding per rectum, and constipation persisting for three days. During the clinical examination, a mass was identified in the lower left quadrant of the abdomen. The full blood count and c-reactive protein (CRP) levels were normal.
A CT scan was conducted, which revealed a colorectal intussusception caused by an oval-shaped, heterogeneous lesion measuring 42x38mm in the sigmoid colon. The blood flow in the surrounding mucosa appeared to be intact. A lipoma or liposarcoma was suspected as the cause of the intussusception (figure 1).
An emergency decision was taken up for surgery, exploration found colorectal intussusception, after reduction; intraluminal sigmoid pedunculated mass was the lead point of invagination. The surgical procedure consists of a carcinological segmental colectomy with stoma; the condition of the bowel was not optimal for primary anastomosis. (figure 2,3)
Microscopic study showed an adipocyte-composed material with inflammatory and infarcted mucosa.
Patient was discharged 3 days later with no complications.
A secondary end to end anastomosis were performed 6 weeks later.

Discussion
Colonic lipomas are usually small and symptom-free, and are typically discovered incidentally [3]. However, in approximately 25% of cases, they can cause clinical symptoms such as colonic intussusception. This condition is more commonly found in women (57%) than men (43%) [4]. Abdominal pain is the most frequent symptom observed in 83% of cases of colonic intussusception caused by colonic lipoma. Other symptoms that are frequently seen include changes in bowel habits, especially constipation (18%), rectal bleeding (16%), and vomiting (14%) [4].

Ultrasound is a fast and minimally invasive imaging technique that is typically the first approach for detecting intussusception when performed by a skilled and proficient operator [5]. Computed tomography (CT) scans have a sensitivity of 71-87% and a specificity of up to 100% [6], and can identify intussusception as a lesion with the characteristic "target sign" or "donut sign". CT can also determine if a lesion is made up of adipose tissue, and if it has an oval shape, there is a high likelihood of it being a lipomatous lesion [7]. Colonoscopy allows for direct visualization of the lesion and enables biopsies to be taken. Certain features, such as the "pillow mark" and "bare fat mark," are specific to lipomas [7, 8].

In over 70% of patients, at least 2 instrumental examinations are needed before the diagnosis of intestinal intussusception caused by a lipoma is made [4].

The transverse colon is the most frequently reported site for colonic lipomas (25%). The second most common sites are the sigmoid colon and cecum, each accounting for 20.2% of cases [1].

Symptomatic colonic lipomas such as those causing intussusception or bowel obstruction require surgical resection [9]. If the lesion is confirmed to be benign, the preferred treatment is simple removal of the lipoma, which can be done endoscopically or surgically [4]. Complete surgical resection is necessary for lipomas that are complicated by bowel or intestinal obstruction, and many authors recommend resection in cases of colon intussusception, particularly in elderly patients, due to the increased risk of malignant neoplasms [4, 7].

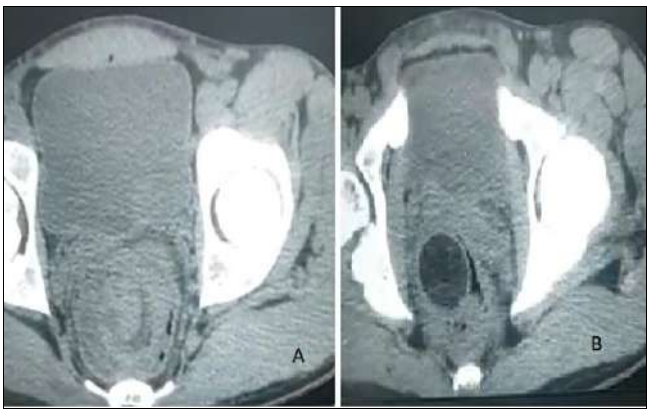

Fig 1: A: CT showing colorectal intussusception; B: CT showing the lipoma

Fig 2: intraoperative findings of reduced colon with the lipoma

Fig 3: Operative specimen of pedunculated lipoma of sigmoid colon

Conclusion

Diagnosing intussusception in adults can be challenging as it is a rare condition. Preoperatively, diagnosing colonic lipomas can be complicated. However, a high level of suspicion and appropriate testing such as abdominal ultrasound, CT scan, and colonoscopy can facilitate quick diagnosis. Surgery is the primary treatment option for intussusception caused by a lipoma. Typically, management involves formal resection of the affected bowel segment due to the high suspicion of malignancy and the potential for complications related to obstruction.

Patient perceptive: The procedure of surgery was explained to the patient with all advantages and possible complications. And it was agreed.

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Author's contribution

Aymane Jbilou: Writing, review and editing of the manuscript.

Younes Aggouri: Contributed for diagnose and treatment of the patient.

Said Aitlaalim: Review, Supervision and surgeons of the patient.

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