

# Sigmoid Lipoma as an Exceptional Cause of Intussusception and Bowel Obstruction in Adults: A Case Report and Review of Literature

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## Abstract

## Case Report

This case report describes a 60-year-old man who presented with acute abdominal pain with marked abdominal distention and red rectal bleeding. A contrast-enhanced abdominal CT scan was performed, which revealed a recto-sigmoid intussusception on lipoma, causing mechanical intestinal obstruction. The patient underwent a partial reduction of the intussusception with partial sigmoid resection and end colostomy. And histologic evaluation confirmed the diagnosis of colonic lipoma. Intussusception of the colon is uncommon in adults and is often associated with malignancy, but other nonmalignant causes such as lipoma may also present with obstructive symptoms, abdominal pain, and rectal bleeding. However, it should be a differential diagnosis of such situations.

**Keywords:** Recto-sigmoid intussusception – Sigmoid Lipoma - bowel obstruction.

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## INTRODUCTION

Intussusception in adults is an unusual condition, occurring in less than 5% of all cases of intussusception [1]. Colonic lipoma is rare and can be the starting point for intussusception [2, 3]. Occurrence of colo-colic intussusception causing bowel obstruction which the lead point is a sigmoid lipoma is an exceptional condition, our report is one of the few to detail this presentation, concerning a 60 years-old-man consulting in the emergency department for acute abdomen and distension, and whom the diagnosis was made by contrast-enhanced abdominal CT scan. Laparotomy with reduction and resection led to excellent results [3].

## CASE PRESENTATION

A 60-year-old-man, with no prior medical or surgical history, presented to the emergency department for abdominal pain, stopping of materials and gases (SMG), abdominal distention and notion of red rectal

bleeding, that had been evolving for six days. The Abdominal examination revealed abdominal distension, generalized abdominal pain on palpation, hypertympy on percussion, and rectal examination the presence of a painless mass of about 5 cm from the anal margin. Furthermore, there was no sign of peritonitis.

Routine blood investigatory showed hemoglobin of 15g/100ml (normal range: 13 to 16,5), an elevation of WBC to 15000 cells/mm<sup>3</sup> (normal range 4,500 to 10,000), and CRP increased to 130 (normal range < 4), a functional renal insufficiency was also noted: blood urea of 66 g/dl (normal range: 10-44 mg/dl), and normal creatinine of 8 mg/l), there were no hydro electrolytic abnormalities.

Contrast-enhanced abdominal CT scan was performed and revealed large bowel obstruction by recto-sigmoidal intussusception which the cause is a well-circumscribed mass of fatty density (white arrow) measuring about 5x5x2 cm compatible with typical lipoma. A small intraperitoneal effusion was also noted.



**Figure 1:** Axial enhanced abdominal CT scan (A) objective a recto-sigmoidal intussusception (sigmoid wall: arrow, rectal wall: arrowhead) on lipoma (Asterix), (B): Sagittal reformation shows distention of colon to up to 6 cm

An emergency decision was taken up for surgery, to relieve the obstruction. The surgical procedure consists to an elective sigmoidostomy.

10 days later, the patient underwent exploratory laparotomy and intra-operative findings confirmed the

initial diagnosis of sigmoid-rectal invagination lipoma, a colonic resection was done around 5 cm upstream and downstream of the sigmoid tumor with a mechanical end-to-end colorectal anastomosis and closure of the stomal site.



**Figure 2:** Intra-operative finding of sigmoidal resection piece with the lipoma

Post-operatively, the patient was managed with bowel rest, appropriate fluid, optimum analgesia, and antibiotics, and has been following up for the last 2 months with no symptoms.

## DISCUSSION

Lipomas of the gastrointestinal tract are not unusual, but they very rarely cause symptoms in case of complications such as intestinal obstruction or intussusception, requiring urgent surgery [1, 2]. The co-

association of both intussusception and obstruction which the cause is lipoma represents an exceptional condition in adults.

In absence of a starting point, intussusception is classified as primary and is most likely to occur in the small bowel, elsewhere it is secondary to an entry point that has been identified [3]. Secondary intussusception may be due to benign, malignant, or even iatrogenic causes [4]. In adults, large bowel intussusception has an identifiable etiology in all cases [3], of which 60-65% of cases have a malignant etiology [7]. In the series by Leon *et al.*, [6], of twenty-four cases of intestinal intussusception in adults, only one case was secondary to a lipoma. In another series by Lebeau *et al.*, [6], of twenty cases of acute intestinal intussusception in adults, no case of lipoma was described.

Early diagnosis of intussusception in adults is challenging, as the classical triad of abdominal pain, palpable abdominal mass, and rectal bleeding are often absent, unlike in children [5].

Contrast-enhanced abdominal CT scan is the main diagnostic tool and the only one to make an indisputable diagnosis of certainty in adults for confirming gastrointestinal tract lipoma and its complications, with a sensitivity of 58-100 % [8].

Surgical resection is required for symptomatic lipomas either intussusception, bowel obstruction, or both [9]. Preoperative diagnosis of a benign etiology makes a more limited resection possible [10]. The laparoscopic approach is slowly gaining acceptance to manage these cases. It allows confirmation of the diagnosis, identifies the site, and enables bowel resection [10, 11]. Several authors have suggested surgical resection without reduction (en- bloc resection) as the preferred treatment for such situations. Azar *et al.*, have suggested that surgical resection without reduction is the preferred treatment in adults, as almost 50% of cases of colonic intussusception are associated with malignancy [11]. However, the reduction is acceptable in post-traumatic cases, idiopathic cases, and typical benign cases, such as our patient.

## CONCLUSION

The occurrence of complications such as intussusception and occlusion due to digestive lipoma is an extremely rare condition in adults. In contrast to children, where abdominal ultrasound plays a significant role in diagnosis. In adults, abdominal CT is the standard imaging modality. Laparotomy with “en-bloc” or 2-stage bowel resection is the reference treatment in these situations.

## Abbreviations

BP: Blood pressure

RR: Respiratory rate

PR: Pulse rate

SMG: Stopping of material and gas

WBC: white blood count

CRP: C reactive protein

VR: Volume rendering

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