



## Colocolic Intussusception on Sigmoid Tumor: Case Report

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### Authors' contributions

This work was carried out in collaboration among all authors. Author AE wrote the protocol and the first draft of manuscript. Authors AE and AEB are the operating surgeons. Authors AE and AEB managed the documentary research, wrote the manuscript and proposed the work for publication. All authors read and approved the final manuscript.

### Article Information

#### Editor(s):

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- Complete Peer review History: <http://www.sdiarticle4.com/review-history/56818>

Case Study

Received 25 March 2020

Accepted 31 May 2020

Published 10 June 2020

### ABSTRACT

We report a case of colocolic intussusception of a sigmoid tumor in a 45-year-old woman. The clinical presentation was abdominal pain. The abdominal ultrasound examination was suggestive of intussusception. The CT scan confirmed the diagnosis of intussusception by showing a segment of the descending colon embedded in the sigmoid producing a cockade appearance. The procedure done was a segmental left colonic resection with a double-barreled ileocolostomy. Histopathological examination revealed a moderately differentiated liberkuhn adenocarcinoma.

*Keywords:* CT scan; intestinal obstruction; intussusception; surgery.

### 1. INTRODUCTION

Intestinal invagination is a rare condition in adults and is potentially serious defined by the

penetration or telescoping of the proximal loop of the intestine into the distal loop resulting in intestinal obstruction [1]. It accounts for 1 to 5% of the etiologies of intestinal occlusion in adults

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[2]. The etiology of intestinal invagination in adults is an organic cause in 70 to 90% of cases, unlike in children, whose origin is the most idiopathic [3]. We report the case of a young patient 45 years old admitted to the emergency room with abdominal pain in the left iliac fossa, the diagnosis of colonic invagination was suspected by ultrasonography and CT scan and confirmed intraoperatively, and histological examination confirmed the tumor origin of the invagination.

## 2. PATIENT AND OBSERVATION

This is a 45-year-old patient with bronchial asthma undergoing basic treatment, admitted to the emergency room with abdominal pain in the left iliac fossa associated with minimal rectorrhagia. On clinical examination, the patient

was conscious hemodynamically and respiratory stable with slightly discolored conjunctiva, the abdominal examination showed tenderness in the left iliac fossa.

The abdominal ultrasound showed a cockade appearance on the axial section and a sandwich appearance on the horizontal section. We completed with an abdominal CT scan with injection of contrast material, which confirmed the diagnosis of showing a segment of the descending colon incorporated into the sigmoid Fig. 1.

The patient had a left segmental colectomy with a double-barrel colostomy on surgical exploration we found a colo-sigmoid invagination on a 5 cm diameter tumor without hepatic metastases or carcinomatosis peritonei Fig. 2.

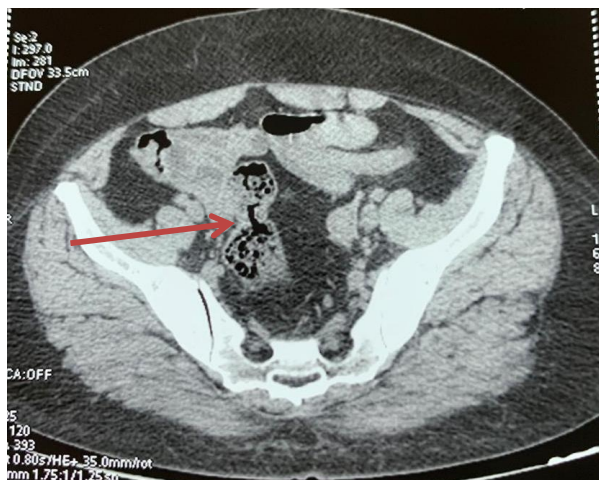


Fig. 1. CT image of a colo-sigmoid invagination [arrow]



Fig. 2. Intraoperative appearance of tumor-induced colonic invagination



**Fig. 3. Picture of the colon after disinvagination**

Histological examination revealed a moderately differentiated liber kuhn adenocarcinoma, the limits line of resection was without microscopic tumoral cells, no lymph node invasion and vascular emboli.

The post-operative follow-up was uneventful, the patient was discharged on at day 3 post-operatively and was referred to the oncology department for further treatment.

### **3. DISCUSSION**

Intestinal invagination is a very rare cause of intestinal obstruction with an estimated incidence of 2 cases/1,000,000 persons/year [4], where an organic cause is found in 70-90% of cases [1] and is defined as the telescoping of the proximal loop of the intestine into the distal loop resulting in obliteration of the lumen [5]. No predominance related to sex or age group has been identified so far; although the mean age of the different published series is between 40 and 50 years [2]. Colonic invagination in adults of tumor origin is mainly due to adenocarcinoma of the colon [84%] followed by lymphoma (9%) [6]. The clinical signs are polymorphic and often misleading, such as an acute intestinal obstruction, a sub-occlusive syndrome or sometimes a non-specific abdominal syndrome [altered transit, diffuse abdominal pain, digestive hemorrhage], sometimes progressing over several months, with or without alteration of the general condition [7]. The abdominal ultrasound associated with color Doppler is a rapid examination that can reveal the invagination coil, but the CT scanner has proved to be more accurate, with an accuracy of almost 100% [1] by showing two typical images: a "sandwich" image

in longitudinal section showing the head of the acute intestinal invagination and a "cockade" image in cross-section showing the coil of the acute intestinal invagination [2]. Given the high association of the malignant etiology of acute intestinal invagination, the curative treatment is essentially surgical with no consideration of hydro reduction under radiological control. A more or less extensive radical resection is necessary in case of colonic invagination due to the high probability of tumor origin with often the recourse to the realization of a stoma. Desinvagination is impossible and resection without prior reduction is recommended to avoid perforation and possible dissemination of cancer cells [8]. The prognosis of intestinal invagination in adults depends on the duration of the evolution, and adjuvant treatment is often started after discussion of the case with a surgical oncologist [9].

### **4. CONCLUSION**

Intestinal invagination is a rare etiology of colonic occlusion in adults where the malignant origin must always be suspected, the treatment in this case is essentially surgical.

### **CONSENT**

As per international standard or university standard written patient consent has been collected and preserved by the author(s).

### **ETHICAL APPROVAL**

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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DOI: 10.1016/s0399-8320(05)82182-7

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The peer review history for this paper can be accessed here:  
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