

A Colic Adenocarcinoma as the Primary Cause of Colo-Colic Intussusception: A Rare Case of Obstruction

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Abstract

Case Report

This article discusses the case of a 70-year-old woman who presented with abdominal pain and vomiting, and was diagnosed with colonic-colonic intussusception caused by a tumor. Colonic intussusception is a rare cause of acute abdomen in adults, and malignant tumors are the most frequent cause of colonic intussusception. The article highlights the importance of imaging, specifically abdominal CT scans, in diagnosing and managing this condition. The CT scan can confirm the site of intussusception and specify the severity signs, and it is more specific than ultrasound and endoscopy. The article also describes the different intussusception patterns seen on CT scans and their significance. Early diagnosis is important in preventing complications such as infarction and perforation. The authors suggest that colonic intussusception may be the result of infiltration of the colonic wall musculature by the malignant tumor despite the colon being devoid of peristaltic activity. Overall, the article emphasizes the importance of a combination of clinical and radiologic data in diagnosing and managing colonic intussusception caused by tumors.

Keywords: Adenocarcinoma, cholecystectomy, abdominal CT, lymph node dissection.

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INTRODUCTION

Intussusception is a less frequent surgical emergency in the adult population, representing only 5% of all reported cases [1]. It is often secondary to an identifiable lesion in 90% of cases, while in some cases, the cause remains difficult to diagnose. Malignant tumors, particularly colonic, are the most frequent cause of colonic intussusception [2]. It can complicate colonic-colonic intussusception, making its etiological diagnosis difficult due to its low incidence and rarity in adults. In this pathological entity imaging plays a crucial role in the diagnostic and prognostic management. Especially, abdominal Computed Tomography (CT) scan remains the examination of choice in case of emergency due to its availability and high specificity [2]. In this paper we report the case of a 70-year-old woman with colonic obstruction due to colonic-colonic intussusception revealing a tumor etiology, while discussing the radiological aspects of

this condition and the role of imaging in its therapeutic management.

MEDICAL OBSERVATION

A 70-year-old woman with a history of 15 years of hysterectomy and 04 years of cholecystectomy. The onset of symptoms dates to 06 days prior to her admission, with the onset of diffuse abdominal pain, associated with food vomiting, without fever or alteration in general state. Clinical examination revealed a conscious, stable patient in terms of hemodynamic and respiratory status with a distended and diffuse tympanitic abdomen. Rectal touch revealed an empty rectal ampoule. An intestinal obstruction was suspected, and an abdominal CT scan was requested. The CT scan was performed with and without contrast injection and revealed distension of the colon upstream from an intussusception bead associated with regular thickening of the sigmoid and descending colon, without signs of suffering or detectable severity (Figure 1, 2 & 3).

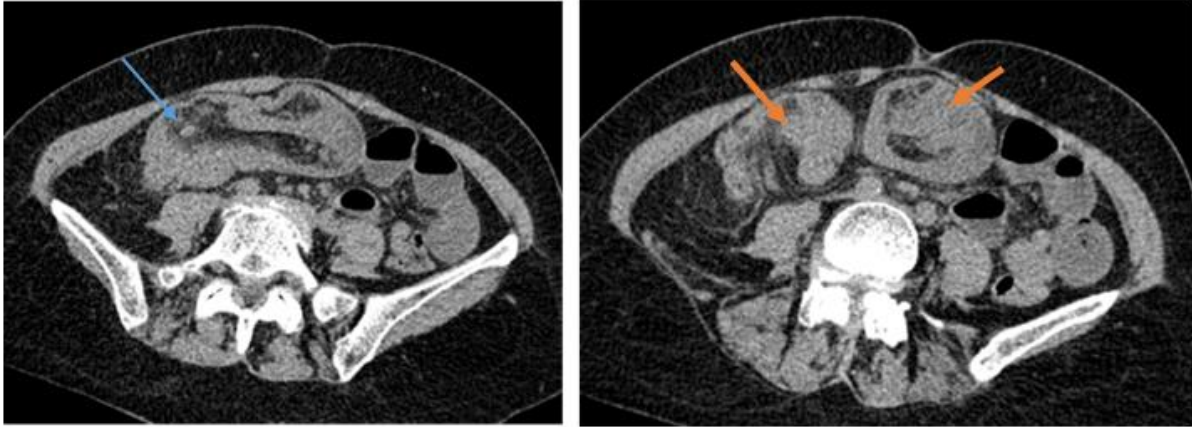


Figure 1: Abdominal CT (C-): Image of colo-colic invagination (orange arrow) with individualization of adenopathies in the mesenteric fat contained in the invagination bulge (blue arrow)

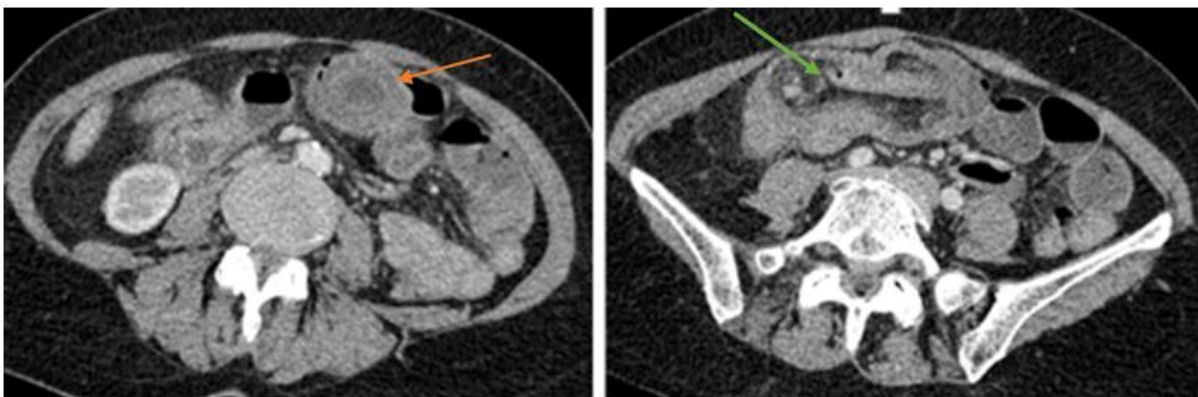


Figure 2: double sulcus of colo-colic intussusception giving a sausage-like appearance of the colonic loop (green arrow). Circumferential and regular parietal thickening of the colonic segment downstream of the intussusception (Orange arrow)

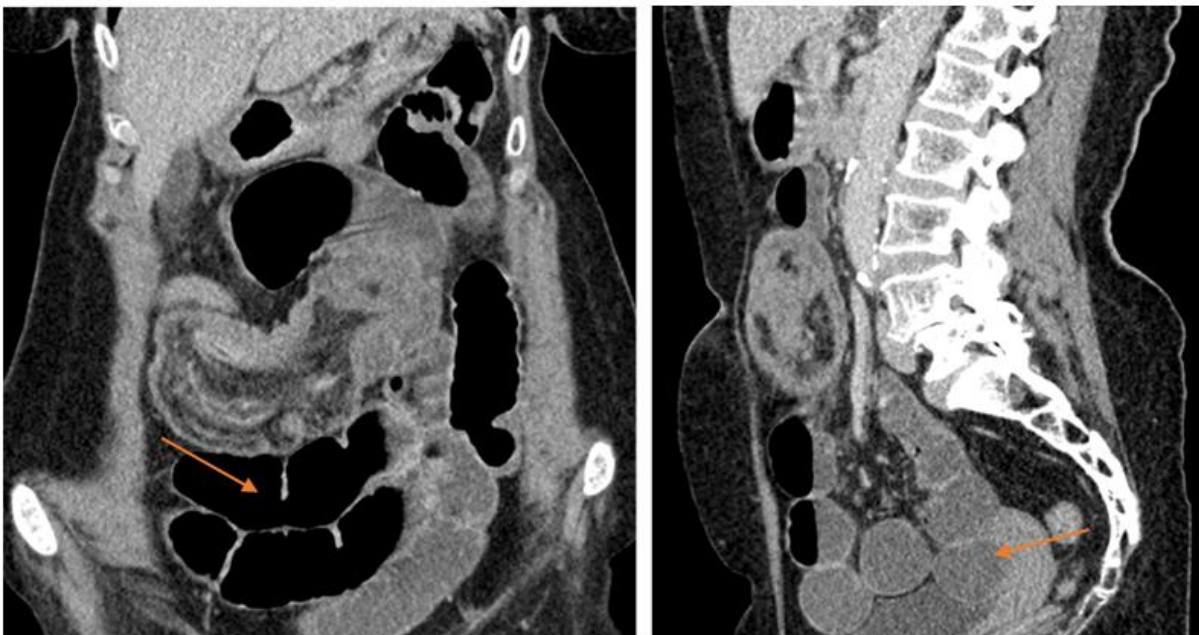


Figure 3: Coronal and sagittal section with injection: hydroaerobic dilatation of the small intestines upstream of the invagination flange without signs of parietal damage

A tumor or inflammatory origin was suspected. Colonoscopy revealed a stenosing tumor in

the left colon and the anatomic pathology was in favor of a moderately differentiated colonic adenocarcinoma

infiltrating the chorion. The surgical decision opted for a left hemi colectomy with colonic-colonic anastomosis

and lower mesenteric lymph node dissection (Figure 4).



Figure 4: Images from the operating room showing the hemi colectomy with lymph node dissection

DISCUSSION

Colonic invagination is a rare cause of acute abdomen in the adult population, and distal colonic invagination only represents 2.1% to 9.4% of all invaginations [3]. The most frequent cause is represented by colorectal cancer, while rarer causes are also described [4]. The mechanism of invagination usually involves a pathological parietal intestinal lesion or wall anomalies that are responsible for reducing normal peristalsis and serve as the starting point, generating an invagination of one segment of the intestine into the other [5]. Adult invagination is difficult to diagnose because patients generally present with vague, non-specific symptoms, usually represented by abdominal pain. Other symptoms include nausea, vomiting, and sometimes rectal bleeding [6]. Manual or radiographic reduction is often ineffective in adults and carries a risk of intra-luminal seeding and venous dissemination of the tumor due to the risk of malignant etiology. Computed tomography has been found to be the most useful for confirming the site of invagination and specifying the severity signs. It is more specific than ultrasound and endoscopy. Ultrasound is the second most accurate, especially in case of duodenal invagination [7]. The scan must be performed according to a precise protocol, respecting the three times: without injection, arterial time, and portal time with a multi-planar study. The aim of the scan is to confirm the occlusion and its mechanical character, specify the location of invagination and search for any signs of severity. In CT, three different intussusception patterns

have been described, reflecting the severity and duration of the pathological process. A target-shaped aspect is seen at the earliest stage, and when the beam is perpendicular to the longitudinal axis of the intussusception. This progresses to a sausage-shaped mass with alternating low and high attenuation zones, representing mesenteric fat and the intestinal wall, which is best seen when the beam is parallel to the longitudinal axis of the intussusception. Finally, a reniform (pseudorenal) mass develops due to edema, thickening of the wall, and vascular compression [8]. When pressure in the wall increases, venous flow and then arterial flow decrease, causing serious and irreversible complications. Early diagnosis can prevent progression to infarction and perforation. Our case represents the typical picture of a distal invagination occlusion, without signs of severity. Alexis Roditis *et al.*, Randa Taher *et al.*, and Sudheer R. Vemuru have reported cases with a similar clinical and radiological presentation to our case, with signs of malignancy at the anatomopathological examination [9-11]. The authors suggest that colic invagination may be the result of infiltration of the colonic wall musculature by the malignant tumor despite the colon being devoid of peristaltic activity. But this hypothesis requires a large series of colic invagination on malignant tumor with anatomopathological study to confirm the causal link between musculature infiltration and the likelihood of colic invagination.

CONCLUSION

In conclusion, colon invagination is rare in adults and its diagnosis requires a combination of clinical and radiologic data. CT scan is the most sensitive and quickest technique for diagnosing neoplastic colon invagination and addresses all important questions such as location, type of lesion, vascular involvement, and extent of the process.

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