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Colo-colic Intussusception on a Coecal Tumour: A Case Report

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Introduction: Adult intussusception is a rare clinical condition (1) and about 70%-90% of adult intussusception cases (2). The principle causes are benign or malignant tumors. In adults, the most frequent localizations of intestinal invaginations are the ileo-cecal segment, ileum and colon as exclusive localization (3). the diagnostic and therapeutic methods must be adapted to each case (4).. We report a case of cecal-colonic intussusception treated surgically and review the characteristics and treatment of colonic intussusceptions in the literature.
Materials and Methods: Our work is a retrospective case report with a descriptive aim concerning a patient operated for a colonic intussusception within the department of general surgery of CHU Ibn Rochd Casablanca.
Case Report: A 61-year-old woman presented to the department with diffuse abdominal pain evolving for 4 months with alternating constipation and diarrheal debacle, without externalized digestive hemorrhage, all evolving in a context of apyrexia and alteration of general condition. On

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physical examination, the patient was conscious and stable on the respiratory and hemodynamic level and abdominal examination found a generalized abdominal tenderness without palpable mass. The abdominal CT scan showed an aspect of ileocolic intestinal invagination on a tumor-like thickening of the right colon wall measuring 2.5 cm, extended to the right colonic angle. It also showed that the right kidney was in a pelvic ectopic position. The operation was performed by laparotomy through a median incision. On exploration, we found an intussusception of the cecum at the level of the ascending colon on a cecal tumor of 5 cm, it was therefore a cecal-colic intussusception. The intervention consisted of a right ileo-hemicolectomy removing a cecal-colic intussusception with terminal ileo-colic anastomosis by separate stitches and with retro-anastomotic drainage and of the parieto-colic gutter.

Conclusion: Colonic intussusception is a rare cause of obstruction in the adult and its preoperative diagnosis remains difficult. Surgery remains the mainstay of treatment.

Keywords: Intussusception; coecum; right colon; anastomosis.

1. INTRODUCTION

Adult intussusception is a rare clinical condition [1] and about 70%-90% of adult intussusception cases [2]. The principle causes are benign or malignant tumors. In adults, the most frequent localizations of intestinal invaginations are the ileo-cecal segment, ileum and colon as exclusive localization [3]. The diagnostic and therapeutic methods must be adapted to each case [4].

We report a case of cecal-colonic intussusception treated surgically and review the characteristics and treatment of colonic intussusceptions in the literature.

2. CASE REPORT

A 61-year-old woman with a pathological history of type 2 diabetes and cholecystectomy 1 year prior to admission presented to the department with diffuse abdominal pain evolving for 4 months with alternating constipation and diarrheal debacle, without externalized digestive hemorrhage, all evolving in a context of apyrexia and alteration of general condition. On physical examination, the patient was conscious and stable on the respiratory and hemodynamic level and abdominal examination found a generalized abdominal tenderness without palpable mass. The abdominal CT scan (Fig.1) showed an aspect of colocolic intestinal invagination on a tumor-like thickening of the right colon wall measuring 2.5 cm, extended to the right colonic angle with infiltration of the surrounding fat and satellite adenomegaly. It also showed that the right kidney was in a pelvic ectopic position.

The operation was performed by laparotomy through a median incision above and below the umbilicus. On exploration, we found an intussusception of the coecum at the level of the ascending colon on a cecal tumor of 5 cm, without colonic or bowel distension, it was therefore a coecal-colic intussusception. The ectopic right kidney was also seen in the pelvic situation. The intervention consisted of a right ileo-hemicolectomy removing a cecal-colic intussusception with terminal ileo-colic anastomosis by separate stitches and with retro-anastomotic drainage and of the parieto-colic gutter.

The postoperative course was simple. The patient was declared at D7 after the drain was removed and oral feeding was allowed.

Histopathological examination showed a well-differentiated adenocarcinoma with healthy excisional borders.

After the result of the histopathology examination, the patient underwent postoperative chemotherapy and the follow-up was 2 years.

3. DISCUSSION

Adult intussusception is uncommon and accounts for 5% of all intussusceptions and 1% of all bowel obstructions [5]. Reports of colonic intussusception are less common in the literature and have usually been confined to series including both small- and large-bowel types [6-7].

Colonic intussusception is caused by a malignancy more frequently than is small-bowel intussusception, because of the greater prevalence of malignant tumors in the colon (e.g., primary adenocarcinoma, lymphoma, and metastatic disease to the colon) than in the small

bowel [8-9]. Thus, surgical exploration remains mandatory. Benign colonic lesions constitute about 30% of colonic intussusceptions and include lipoma, benign stromal tumors, adenomatous polyps, endometriosis, and previous anastomoses [5]. Ileocecal intussusception can occur from a lead point in the colon, ileum, or appendix [9]. Idiopathic colonic intussusception is rarely reported [10] as opposed to the more frequent scenario in the small bowel, where intussusception is reported to be idiopathic in 70% of cases [6]. The Mayo Clinic experience with 144 cases of adult intussusception, treated since 1910, has demonstrated that at least 86% of the cases were associated with a discrete, pathologic process leading the intussusception. In contrast, only 20 cases (14%) were considered to be idiopathic [11].

Compared with entero-enteric intussusception, colonic intussusception more often presents in a subacute manner with prolonged abdominal pain and constipation, but acute presentations do occur [5].

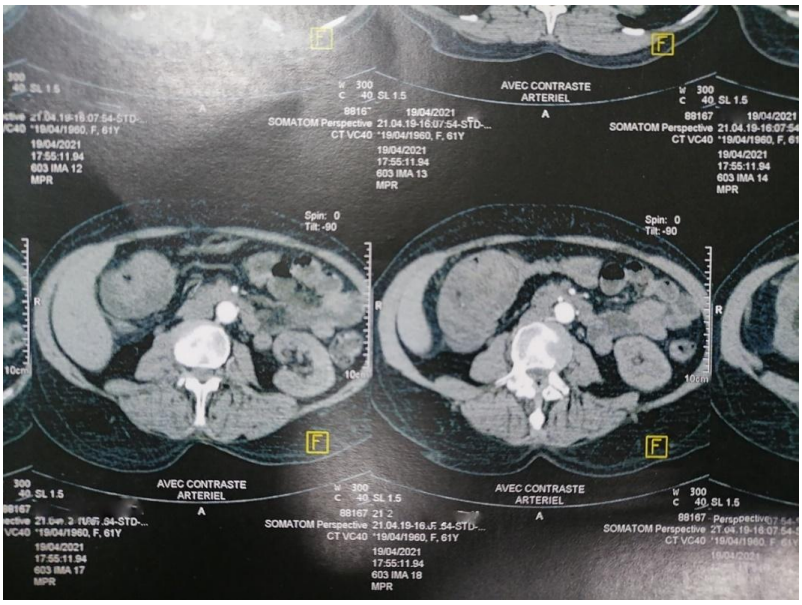

Fig. 1. Abdominal CT scan showing an aspect of ileocolic intestinal invagination

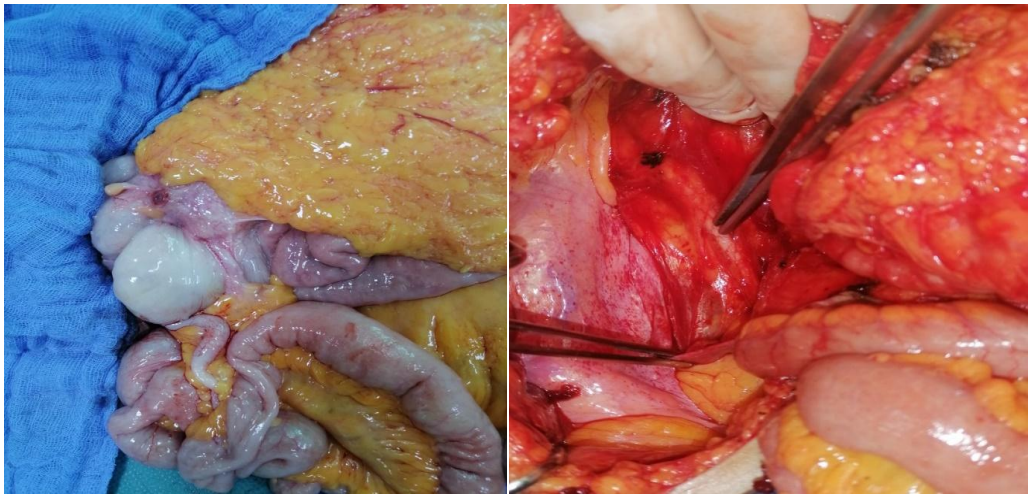

Fig. 2,3. Intraoperative images of the cecal-colonic intussusception

The CT scan is very useful for the diagnostic, it was the most accurate preoperative diagnostic method compared to ultrasonography, small bowel series, barium enema, and colonoscopy, with an accuracy of 77.8%. Significant advancements in CT technology, along with progressive use of multi-detector CT (MDCT) in the diagnosis of abdominal emergencies, may help clinicians not only to differentiate intussusception from other abdominal emergencies, but also to avoid unnecessary surgery [12].

The optimal surgical management of intussusception in adults remains controversial. The surgical approach is influenced by four major considerations [11]: 1) the frequency of an underlying etiologic factor, itself requiring operative therapy, 2) the prevalence of associated malignancy and the implications of any undue operative manipulation, 3) the anatomic site and extent of the intussusception, and 4) various local, intraoperative factors, such as the degree of associated inflammation, edema, and relative ischemia of the involved bowel.

Whether reduction of the intussuscepted bowel before definitive treatment of the inciting lesion influences operative management, postoperative morbidity, or long-term survival remains speculative.
Considering these factors, Nagorney et al. [11] developed general guidelines for the optimal management of intussusception in the adult. In colo-colic intussusceptions, primary surgical resection without prior attempt at reduction represents the treatment of choice, except in unusual circumstances. Treatment of intussusception involving the right colon should encompass a right or extended right hemicolectomy. When the intussusception involves only the descending or sigmoid colon, left hemicolectomy without reduction is advocated.

Most ileocecal intussusceptions are indistinguishable from cecally based colo-colic intussusceptions during operation and should be treated by right hemicolectomy, as recommended by Brayton and Norris [12].

Despite the lack of adequate preoperative bowel preparation and often emergent indications for operation, mortality and morbidity rates of colonic intussusceptions are minimal. A recent meta-analysis carried by Hong et al. found a postoperative morbidity rate of 22.1% with the most common cause being surgical site infection and a mortality rate of 5.2% [13].

4. CONCLUSION

Colonic intussusception is a rare cause of obstruction in the adult and its preoperative diagnosis remains difficult. Surgery remains the mainstay of treatment. The resection of the colonic intussusception must be performed “in one piece” due to the high rate of malignancy.

PATIENT CONSENT

Written informed consent for publication of their clinical details and clinical images was obtained from the patient.

ETHICAL APPROVAL

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

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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