

Caecal volvulus: a case report

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Abstracts: *The volvulus of the caecum is a torsion of the right colon around its mesenteric axis which is only possible if the proximal colon is mobile. The cecum in frequency, the second part of the colon concerned by volvulus after the sigmoid and before the left angle and the transverse colon. This condition occurs in abnormally mobile cecum, the mechanism of volvulus is torsion or tilt. The clinical picture is that of an acute intestinal occlusion by strangulation. The X-ray of the abdomen without preparation makes it possible to establish the diagnosis, the scanner remains the most powerful. Ileo-cecal resection is the best therapeutic option. Caecocolopexy may be an alternative treatment in elderly subjects, or in debilitated terrain and in the absence of necrosis.*

Keywords: Intestinal occlusion, volvulus, caecum, ileocecal resection

Abstract: The volvulus of the cecum is a twisting of the right colon around its mesenteric axis that is only possible if the proximal colon is mobile. The cecum is the second part of the colon concerned by volvulus after the sigmoid and before the left angle and the transverse colon.

This condition occurs in abnormally mobile cecums. The mechanism of volvulus is torsion or tilt. The clinical picture is that of acute intestinal obstruction by strangulation. The diagnosis can be made with an unprepared abdominal X-ray, and the CT scan is the most effective.

Ileo-caecocolic resection is the best therapeutic option. Caecocolopexies can constitute a therapeutic alternative in elderly subjects, or on debilitated terrain and in the absence of necrosis.

Mots clés : Occlusion intestinale, volvulus, cæcum, résection iléo-cæcale

Introduction :

The term volvulus comes from the Latin *volvere* (to roll up). This pathology corresponds to a torsion of the initial part of the right colon and the terminal part of the small intestine. It leads to strangulation occlusion or the cecum is dilated.

The first description of volvulus of the cecum was reported by Rokitanski in 1837 (1).

It is the second most common cause of volvulus of the colon in general.

Despite numerous publications the symptomatology and management of this pathology remain controversial topics [2,3].

We report the case of a patient taken care of in the emergency room of our institution CHU Hassan 2 Fez .

Patient and observation:

This is a young patient, 62 years old, with a history of : Ischemic stroke poorly followed and hypertension under treatment.

Admitted to the emergency room of our training in a picture of occlusive syndrome: cessation of matter and gas for 4 days with installation of vomiting on the day of his admission

Clinical examination on admission revealed a patient tachycardia at 110 beats/min with hypotension at 90/50 mmHg, FR: at 22 cycles/min and temperature at 37°C.

Abdominal examination showed a distended, tympanic abdomen with no pain and an empty rectal ampulla.

After initial conditioning:

2VVP + vascular filling + with intravenous injections of proton inhibitors.

SNG, SU

A biological check-up on admission showed a hyperleukocytosis of 13,000 with a predominance of PNN and a CRP of 100 with a normal ionogram.

An abdominal-pelvic CT scan (Figure 1) showed distension of some of the gallbladders involving the middle and terminal ileum and of the cecum, which was ascending, measuring 70 mm in maximum caliber with hydroaerobic content, realizing a level, with incontinence of Bauhin's valve upstream of a turn of the spiral in favor of a cecal volvulus, without any sign of suffering.

The patient went to the operating room: after installation of the patient and general anesthesia, a median incision was made, the exploration of which revealed an important relic and caecal distension upstream of an organ-axial volvulus of the cecum.

Manual devolvulation with ileum-caecal resection and mechanical ileo-colic anastomosis with GEA forceps and drainage with a drain at the level of the cul sac of Douglas.

The postoperative follow-up is simple

Discussion :

Caecal volvulus can only occur if the proximal colon is mobile, causing the right colon to twist around its mesenteric axis.

The prevalence of cecal volvulus is not precisely known. It is considered to represent 1% of acute mechanical bowel obstructions [4], and 20 to 40% of colonic volvulus [5, 6]. It is the second most common cause of colonic volvulus [5].

The average age of onset is between 55 and 65 years. The series of Cugnenc et al. found a mean age of 61.8 years [7], thus agreeing with most authors. Only Meyers et al. considered it a disease of young adults [8]. Sporadic pediatric cases have been described [9].

There is no clearly established gender-related predisposition.

The pathophysiology of cecal volvulus is multifactorial: it results from the combination of an abnormal mobility of the cecum of congenital origin due to an incomplete embryological rotation of the intestine or to a defect of docking of the ascending colon to the posterior parietal peritoneum [4, 5] as well as a favouring factor such as flanges and adhesions of the ileocecal region [11], extrinsic compressions due to pregnancy or intraperitoneal tumours [12], downstream obstacles (stenosing colorectal tumours, volvulus of the sigmoid).

Disturbances of colonic motricity whether constipation or diarrhea create favorable conditions for volvulus [6, 10]. Thus, patients on neuroleptics constitute a privileged terrain.

Two mechanisms may be responsible a torsion of the cecum around its base constitutes the "true" cecal volvulus, by organo-axial mechanism, with in general a torsion of the terminal ileum (90% of cases) or the tilting of the cecum is done by a mesenteric-axial mechanism (10%)

The association of the two mechanisms is possible with a high rate of necrosis in the torsion because it involves the cecum, its meso as well as its vessels.

The clinical diagnosis is that of an acute intestinal occlusion by strangulation.

The onset is often brutal, marked by paroxysmal abdominal pain on a permanent background, found in almost all patients [2, 4-8, 10-12] located in the right iliac fossa, the right flank or the right hypochondrium accompanied by vomiting and cessation of matter and gas with tympanic meteorism with painless rectal touch.

Biology does not contribute to the diagnosis.

Imaging gives the best diagnostic arguments: the unprepared abdominal film can be useful for the diagnosis but its sensitivity is generally low [2] It shows the distended cecum, giving the image in "coffee bean" or in "tear drop", associated with hydro-aeric levels of the small intestine, and an absence of air in the colon.

Abdominal CT is a powerful diagnostic test. It allows the diagnosis of an associated complication such as ischemia or perforation[13] .

Colonoscopy can be performed showing volvulus and more or less deep colonic parietal ischemia[14,15].

Endoscopic detorsion is feasible in the absence of severe ischemia but carries a non-negligible risk of perforation[16] .

The basis of treatment is threefold: to reduce the torsion when possible, to treat evolving complications and to prevent recurrence

Right hemicolectomy with primary anastomosis is recommended by several teams even in the absence of colonic necrosis because it eliminates the risk of recurrence [17-18]. Caecostomy is effective in preventing recurrence but carries a high risk of wall infection and exposes to the risk of digestive fistula requiring a closure procedure.

Infectious complications are less common with cecopexy but recurrences are more frequent [19].

The laparoscopic approach [20] is rarely used in emergency because of the distension of the cecum and the difficulties of exposure. It could be performed after detorsion and endoscopic exsufflation.

Conclusion :

The volvulus of the cecum occurs in mobile cecums with torsion or tilt. The diagnosis is usually delayed because of the atypical picture of intestinal obstruction. A good reading of the unprepared abdomen x-ray should be sufficient to make the diagnosis and to rule out sigmoid colonic volvulus in most cases. In doubtful cases, the water-soluble enema but

above all the abdominal CT scan provide essential information. Right hemicolectomy is the best treatment. However, conservative methods are an alternative in certain high-risk patients with a viable cecum. Caecostomy has been shown to be ineffective or even harmful .

Conflicts of Interest:

The authors declare no conflicts of interest.

Author Contributions:

All authors have read and approved the final version of the manuscript.

Figures :

Figure 1:

Figure 2:

Figure 3:

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Figure 1 : volvulus of caecum

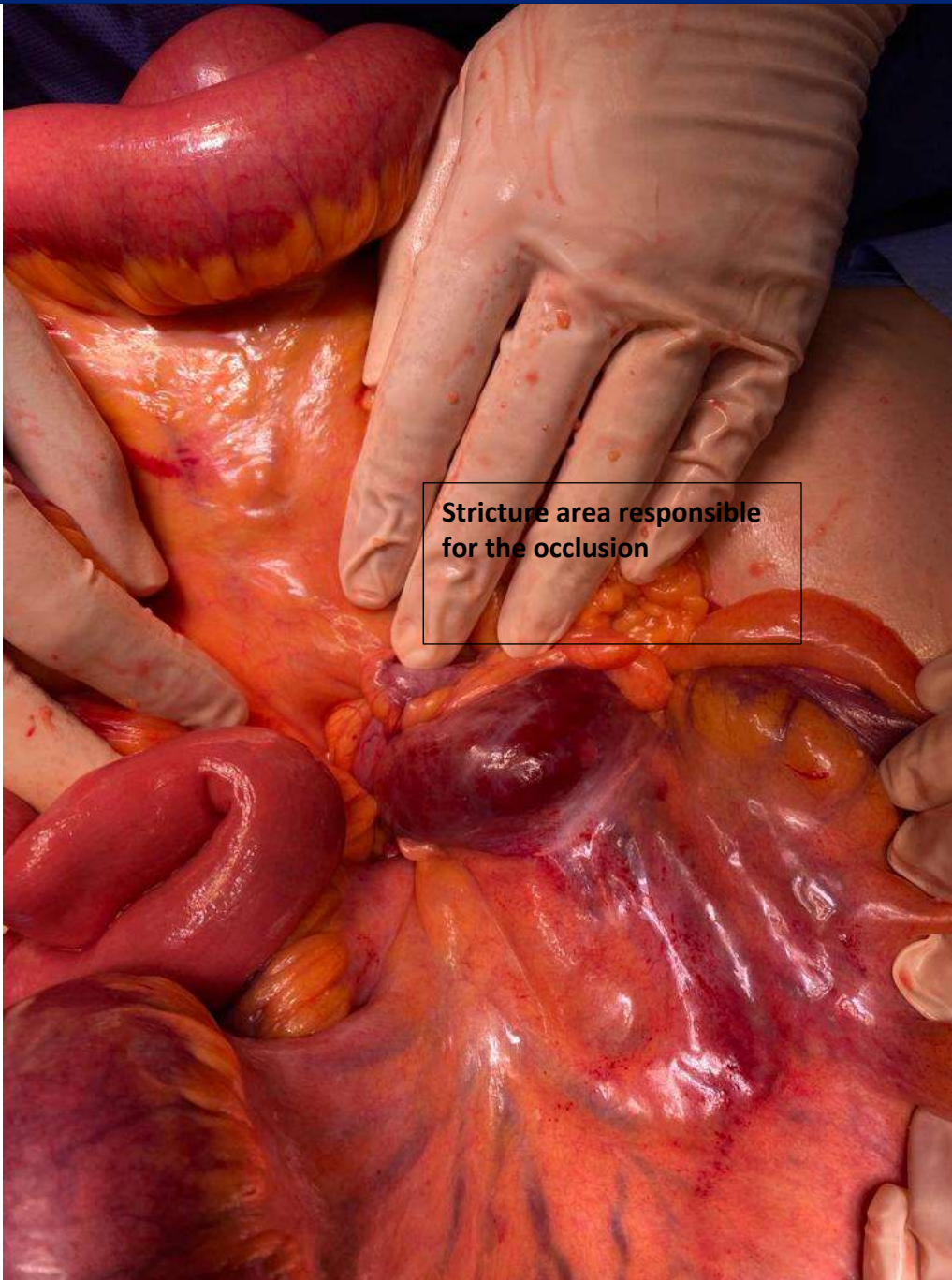


Figure 2 : stricture area responsible for the occlusion



Figure 3: image axiale montrant la zone de striction en bec de oiseau

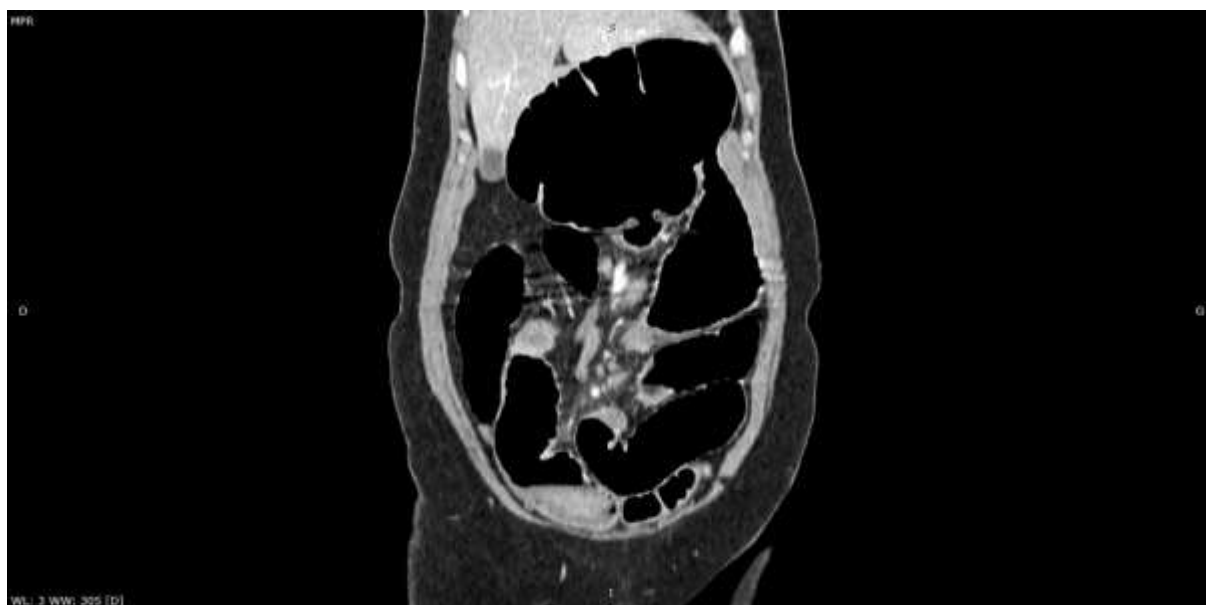


Figure 4 : image coronale montrant la zone de striction