

A Rare Occurrence of Caecal Volvulus and Sigmoid Volvulus

Rabie Soultana^{1*}, Mohamed Yassine², Achraf Laiz², Azzi Abdenbi², Ibrahim Kallout², Yazough Issam², Ait Laalim Said²

¹Resident in the Department of General Surgery and Digestif Oncology, University Hospital of Tangier, Morocco

²Departement of General Surgery and Digestif Oncology, University Hospital of Tangier, Morocco

DOI: <https://doi.org/10.36347/sjmcr.2024.v12i12.001>

| Received: 14.10.2024 | Accepted: 25.11.2024 | Published: 03.12.2024

*Corresponding author: Rabie Soultana

Resident in the Department of General Surgery and Digestif Oncology, University Hospital of Tangier, Morocco

Abstract

Case Report

The caecal volvulus is the torsion of the first part of the colon around its mesenteric axis. This location remains exceptional compared to the sigmoid, which is the usual seat of the volvulus. We present the case of a patient who was operated on 7 years ago for a volvulus of the sigmoid, and who presents for a second episode of an occlusive syndrome of the caecal volvulus. The diagnosis was retained by an injected abdominal pelvic CT, and emergency surgical treatment was indicated with a straight hemicolectomy with double stomas. The post-operative follow-ups were without particularities and a return home on the 4th day.

Keywords: Caecal volvulus, occlusion, right hemicolectomy, double stoma.

Copyright © 2024 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

The cecum volvulus is the second stage following the sigmoid volvulus, accounting for 1% of intestinal obstructions [1].

The caecal volvulus is divided into two main types: the rotatory volvulus and the caecal volvulus. Diagnosis is based on imaging mainly abdominal CT. Management should be prompt to avoid complications that may endanger the patient's life.

A particular case of a patient who has already been operated on for a sigmoid volvulus and is presenting for a caecum volvulus actually.

CASE PRESENTATION

This is a patient aged 75 years, with a history of a volvulus of the sigmoid 7 years ago who had received a Bouilly Volkman discharge colostomy initially and then recovery of continuity after 2 months.

Admitted to the emergency room for an occlusive syndrome with no gases and stools associated with vomiting that has been developing for 3 days without any notion of rectorrhagia or melaena.

Clinical Examination found a patient conscious, afebrile, tachycardia at 120 B/min, blood pressure: 90/50, Sao2: 95%, RF: 20 C/min.

Abdominal Examination: Median laparotomy scar, distended abdomen, diffuse abdominal sensibility with hypertympanism. The herniary orifices are free. Rectal examination: empty rectal blister

Biology: CBC normal, CRP: 165 mg/L, failure kidney and inionique trouble.

Medical Imaging:

Abdominal X-ray: objective of mixed colic and small intestine oriented towards the right side.

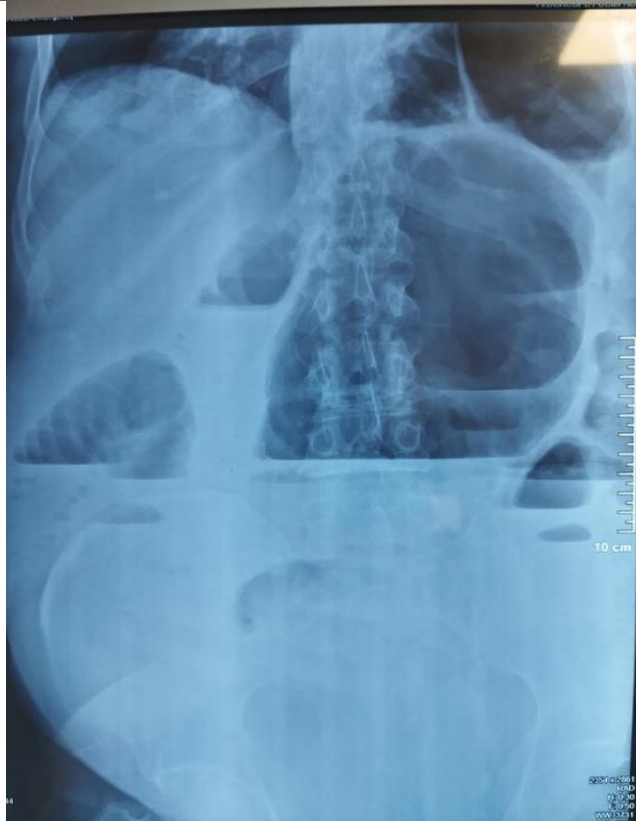


Figure 1: ASP showing mixed hydro-aerial levels

Abdominal CT scan:

Small intestine distension upstream of two contiguous beak signs complicated by volvulus of the

caecum by torsion with an image of whorl without signs of complications.

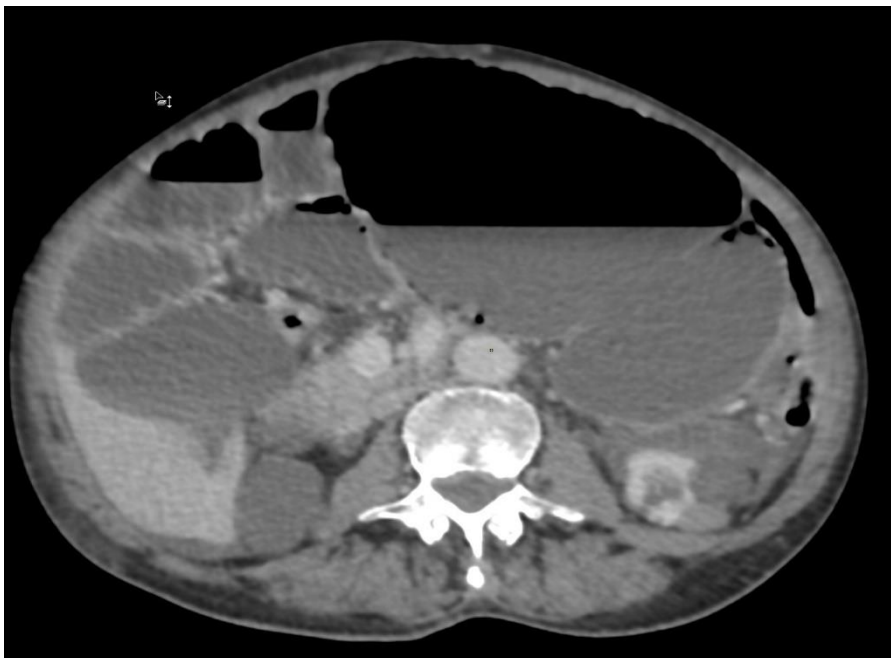


Figure 2: CT image showing a distended caecum tilted at the level of the left hypochondrium

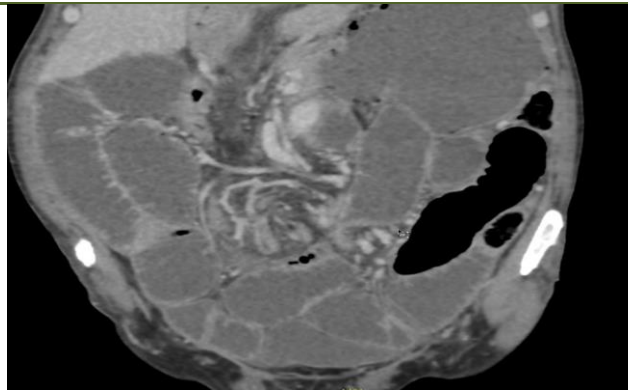


Figure 3: Frontal CT section showing the turn/ whorl sign

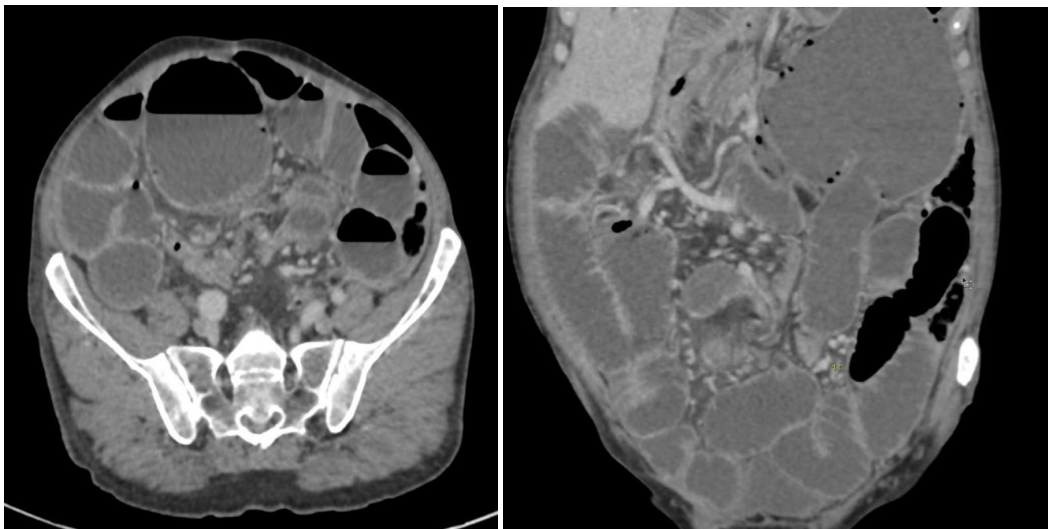


Figure 4: CT sections showing the intestinal flange associated with the cecal volvulus

After initial assessment, the decision was made to perform an operation on the patient. Intraoperatively we noted a volvulus of the cecum with 3 turns on its axis

(Figure 5) with two flanges taking the small intestine (Figure 6).

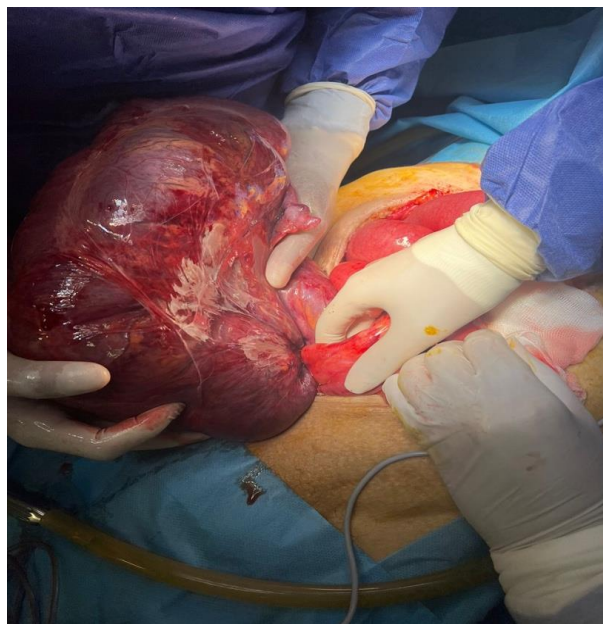


Figure 5: Intraoperative image of cecum volvulus three turns



Figure 6: Intraoperative image of the same patient showing the intestinal flange associated with the volvulus of the cecum

Our intervention is based on the release of the liberation of the flanges, devolvulation, right

hemicolectomy (Figure 7) and confection of a double ileo-transverse stoma.

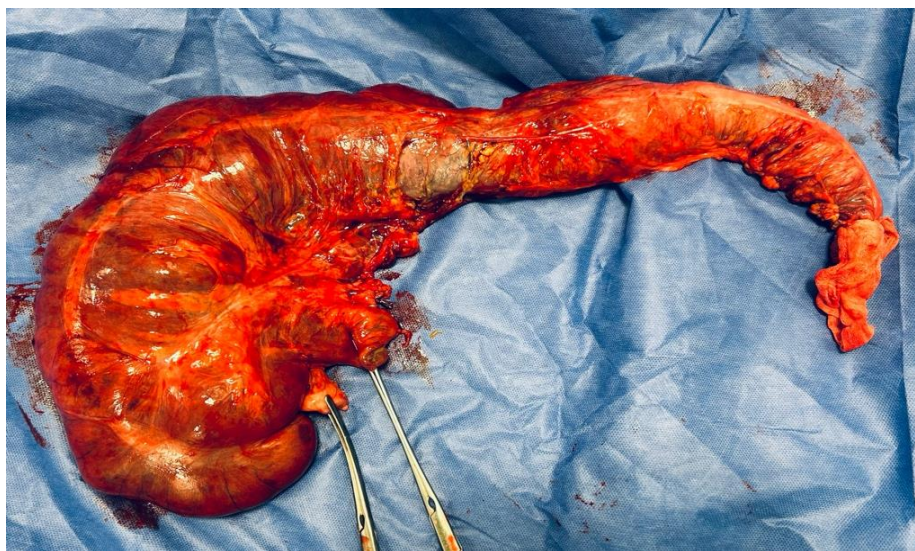


Figure 7: Surgical specimen for right hemicolectomy

The postoperative period was uneventful, and the patient was discharged at day 4 after undergoing treatment for his renal failure function and electrolyte disorders, mainly hypokalemia.

Clinical Discussion

Despite its rareness, caecal volvulus represents the second cause of large bowel volvulus just behind sigmoid volvulus [2].

The particularity of our patient who has made a caecal volvulus associated with an occlusion on flange after a sigmoid volvulus is the first in the world literature over a time interval spaced based on (Google Scholar and

Pubmed) tapping: caecal volvulus and sigmoid volvulus association. This leads us to ask the following question: how do we explain the pathophysiology of this case?

There are many risk factors for this disease:

- Incomplete rotation of the intestine during embryonic life is responsible for hypermobility of the caecum [3].
- About, 20–50% of patients presenting with caecal volvulus have also had previous abdominal surgery. The theory being that post-surgical adhesions provide a fulcrum increasing the risk of torsion of the hyper-mobile caecum [4].

- Other acquired risk factors such as chronic constipation, adynamic ileus or severe acute medical illnesses are thought to be linked through gut dysmotility and subsequent caecal distension, this increased load can cause volvulus of the proximal colon [5, 3].

The CT scan is utilized as a reference for diagnosing various types of colic volvulus. The three pathognomonic CT scan signs associated with acute cecal volvulus are: “coffee bean”, “bird beak”, and “whirl signs”. The CT scan may show signs of intestinal ischemia or necrosis, pneumatosis intestinalis or signs of intestinal perforation such as pneumoperitoneum [1].

It is generally agreed that the only effective treatment for cecal volvulus is surgical intervention. Surgical options include manual detorsion, caecopexy, caecostomy, and right colectomy by open or laparoscopic approaches [6]. If intestinal gangrenous and perforations are encountered, the non-viable intestines should be respected. In the presence of a viable bowel, detorsion and Caecopexy has been proposed as a relatively safe procedure, but it has also been associated with a high recurrence rate [7].

The association of caecum volvulus and the presence of a flange occlusion in our patient with a history of surgery for sigmoid volvulus shows the particularity of our case.

CONCLUSION

The cecum volvulus is a rare surgical occurrence. It is much rarer to have it occur in a patient who has already had a volvulus of the sigmoid.

Diagnosis is based on the injected abdominal scan. The focus of management is to ensure the patient is prepared quickly and adequately for surgery, which is mostly a surgical resection with a discharge stoma.

Conflict of Interest Statement: None Declared

Funding: None

REFERENCES

1. Zabeirou, A. A., Belghali, H., Souiki, T., Majdoub, K. I., Toughrai, I., & Mazaz, K. (2019). Acute cecal volvulus: A diagnostic and therapeutic challenge in emergency: A case report. *Annals of Medicine and Surgery*, 48, 69-72. doi: 10.1016/j.amsu.2019.10.021
2. Chaker, Y., Ouadi, Y., Mahmoud, A. B., Haddad, A., Magherbi, H., & Kacem, M. (2021). A rare association of caecal volvulus and intestinal malrotation causing an acute abdomen: case report. *Annals of Medicine and Surgery*, 65, 102357. doi:10.1016/j.amsu.2021.102357.
3. Bains, L., Gupta, A., Kaur, D., & Batish, A. (2016). Mobile right colon syndrome: obscure cause of lower right abdominal pain. *Iran J Colorectal Res*, 4, e35527.
4. Rout, A., & Pillai, S. (2021). Caecal volvulus: high index of suspicion is the key to early diagnosis. *Journal of Surgical Case Reports*, 2021(11), rjab517. <https://doi.org/10.1093/jscr/rjab517>
5. Consorti, E. T., & Liu, T. H. (2005). Diagnosis and treatment of caecal volvulus. *Postgraduate medical journal*, 81(962), 772-776.
6. Tsushimi, T., Kurazumi, H., Takemoto, Y., Oka, K., Inokuchi, T., Seyama, A., & Morita, T. (2008). Laparoscopic cecopexy for mobile cecum syndrome manifesting as cecal volvulus: report of a case. *Surgery Today*, 38(4), 359-362.
7. O'Mara, C. S., Wilson Jr, T. H., Stonesifer, G. L., & Cameron, J. L. (1979). Cecal volvulus: analysis of 50 patients with long-term follow-up. *Annals of surgery*, 189(6), 724-731.