CASE REPORT

Recurrent splenic flexure volvulus – a rare cause for large bowel obstruction with closed loop obstruction

M. Lafeer, D. Keeragala

Department of General Surgery, Base Hospital (Type A), Puttalam, Sri Lanka

Keywords: Splenic flexure volvulus, Large bowel obstruction, Extended right hemicolectomy

Introduction

Large bowel obstruction due to volvulus is not uncommon [2], with sigmoid and caecal volvulus being the most frequently encountered. Splenic flexure volvulus (SFV), however, is an exceptionally rare entity, responsible for only about 2% [1] of all colonic volvulus cases. Its rarity is due to the typically fixed position of the splenic flexure, anchored by the splenocolic, gastrocolic, and phrenicocolic ligaments. Here, we report a rare case of recurrent SFV.

Presenting with features of a closed-loop obstruction, and successfully managed with surgical intervention..

Case report

A 48-year-old previously healthy male presented with abdominal distension and diarrhea for three days. He gave a history of a similar episode one year prior, for which he had undergone emergency laparotomy, although specific surgical details were unavailable.

On abdominal examination revealed a grossly distended and tympanic abdomen with generalized tenderness. Digital rectal examination revealed an empty rectum.

Laboratory investigations showed a raised white blood cell count and C-reactive protein level. Serum lactate was within normal limits. An abdominal X-ray revealed features of acute large bowel obstruction with a caecal diameter of more than 10 cm.

At emergency laparotomy, a volvulus of the splenic flexure was noted, with gross distension of the transverse and ascending colon. The caecum showed multiple serosal tears, but there was no evidence of ischemia or perforation. An extended right hemicolectomy was carried out, and a side-to-side ileocolic anastomosis was fashioned using an 80 mm GIA linear stapler.

The patient developed a transient postoperative ileus and completely recovered. He was discharged in stable condition on postoperative day 8.

Histopathological examination of the resected colon revealed early ischemic changes confined to the mucosa, with no evidence of transmural necrosis or malignancy. Resection margins were clear, and reactive lymph nodes were identified.

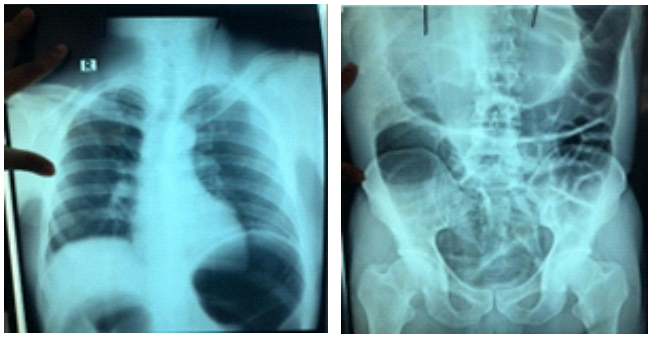

Figure 1: Erect chest X-ray (left) and abdominal X-ray (right) of the patient showing colonic distension

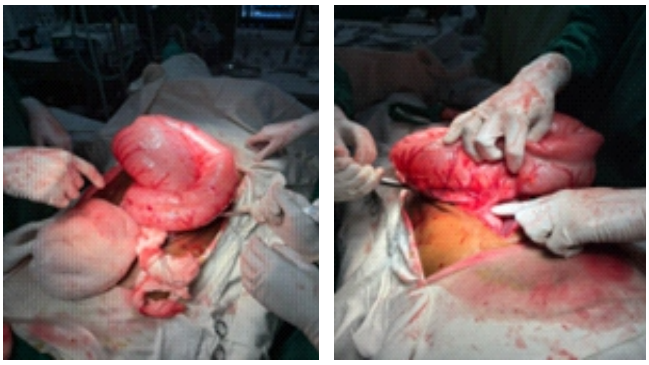

Figure 2: Intraoperative image showing the grossly distended and twisted segment of large bowel at the splenic flexure, confirming volvulus

Correspondence: M. Lafeer
E-mail: mushraflafeer@gmail.com
https://orcid.org/0000-0001-8839-6174
Received: 24-08-2024 Accepted:08-11-2025
DOI: https://doi.org/10.4038/sljs.v43i3.9263

Discussion

The first reported case of SFV dates back to 1953 by Glazer [3]. Fewer than 100 cases have since been reported in the literature. The splenic flexure is considered the least mobile part of the colon due to its anchoring ligaments, which limits its predisposition to volvulus.

Splenic flexure is a fixed point in the large bowel where it is attached to the surrounding viscera and the abdominal wall by splenic-colic, gastro colic and phrenic colic ligaments. Primary SFV is caused by congenital absence or laxity of these ligaments and chronic constipation, while secondary causes may include previous abdominal surgery, done for splenic flexure mobilisation [4].

Apart from classical clinical feature of large bowel obstruction four signs of X-ray abdomen may suggest splenic flexure volvulus:

- grossly dialated colon with abrupt cut off at the splenic flexure
- two air fluid level at the transverse colon and caecum
- empty descending colon and rectum
- characteristic beak at the splenic flexure

CT abdomen is the investigation of choice. Due to the rarity of the condition often the diagnosis is made during surgery. Management of SFV depends on the presence of complications. Non-operative detorsion may be attempted in stable patients without peritonitis [5]. However, resection is usually recommended due to the high risk of recurrence, perforation, or ischemia. Surgical opinions are resection and primary anastomosis or exteriorisation. In this patient due to previous volvulus, recurrent presentation, and evidence of serosal tears, an extended right hemicolectomy with primary anastomosis was the most appropriate option.

Conclusion

Although rare, splenic flexure volvulus should be considered in patients with recurrent large bowel obstruction, especially those with a previous history of volvulus. Prompt diagnosis and early definitive surgical intervention are crucial to prevent complications and recurrence.

References

1. Islam S, Hosein D, Harnarayan P, Naraynsingh V. Synchronic volvulus of splenic flexure and caecum: a very rare cause of large bowel obstruction. Case Reports. 2016 Jan 18;2016:bcr2015213029. DOI: 10.1136/bcr-2015-2130292. Raveenthiran V, Madiba TE, Atamanalp SS, De U. Volvulus of the sigmoid colon. Colorectal Disease. 2010 Jul;12(7Online):e1-7. DOI: 10.1111/j.1463-1318.2010.02262.x

3. Glazer I, Adlersberg D. Volvulus of the colon: a complication of sprue. Gastroenterology. 1953 Jun 1;24(2):159-72. DOI: 10.1016/S0016-5085(53)80002-8

4. Sharifi A, Tafti SM, Keramati M, Kazemeini A, Behboudi B. Splenic flexure volvulus, a rare etiology of colonic obstruction: case report. International Journal of Surgery Case Reports. 2021 Sep 1;86:106128. DOI: 10.1016/j.ijscr.2021.106128

5. Chauhan S, Shinde RK, Jain Y. Navigating Abdominal Volvulus: A Comprehensive Review of Management Strategies. Cureus. 2024 Apr 10;16(4). DOI: 10.7759/cureus.57978

Learning Points:

- Splenic flexure volvulus is a rare but important differential diagnosis in recurrent large bowel obstruction.
- High clinical suspicion and prompt surgical exploration are critical for timely management.
- Resection with primary anastomosis remains the definitive treatment, especially in recurrent or complicated cases.