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A Rare Case of Sigmoid Volvulus in a 15-Year-Old Girl

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Abstract **Case Report**

Sigmoid volvulus, a rare condition in adolescents, involves torsion of the sigmoid colon, leading to obstruction and potential complications. While it predominantly affects elderly males, we report in this case a 15-year-old girl with no prior medical history who presented with signs of intestinal obstruction. Clinical examination and abdominopelvic CT revealed significant colonic distension and sigmoid volvulus. Emergency surgical intervention, including sigmoid resection and colostomy, was performed, resulting in an uncomplicated recovery. This case highlights the importance of early diagnosis and surgical management in young patients to prevent severe outcomes like ischemia or perforation. Clinicians should maintain a high index of suspicion for sigmoid volvulus in atypical populations to ensure timely intervention.

Keywords: Sigmoid volvulus, Adolescent, Intestinal obstruction, Surgical management, Atypical presentation.

INTRODUCTION

Sigmoid volvulus is a gastrointestinal condition characterised by torsion of the sigmoid colon, leading to obstruction and potentially serious complications [3].

It is the third most common cause of colonic obstruction worldwide, occurring mainly in two localisations: the sigmoid colon and the cecum. In Western countries, sigmoid volvulus tends to affect older men, while caecal volvulus more often affects young women [2]. Sigmoid volvulus is a rare cause of intestinal obstruction in children and adolescents. It is considered to be a disease mainly affecting the elderly, with a highly variable incidence throughout the world. It is more common in regions known as the 'volvulus belt' (Middle East, Africa, Indian subcontinent, Turkey, and South America) [1].

Certain risk factors, such as constipation, are significant risk factors for the recurrence of sigmoid volvulus [3], a high-fibre diet, frequent use of laxatives, a personal history of laparotomy, and anatomical predispositions are common to both localisations. Clinical symptoms are non-specific and include abdominal pain, gaseous distension, and intestinal obstruction. Abdominopelvic computed tomography is currently the gold standard for making a positive diagnosis and detecting any complications [2].

OBSERVATION

We report the case of a 15-year-old girl with no previous history of the disease.

She presented to the emergency department with generalised abdominal pain for 7 days, associated with an occlusive syndrome with cessation of faeces and gas, vomiting but no digestive haemorrhage or respiratory distress. She was afebrile but in poor general condition, with weight loss that could not be quantified.

Clinical examination revealed a conscious, haemodynamically stable patient with no fever. Abdominal examination revealed a distended, tympanic, and generally tender abdomen. There was no hernia and no palpable abdominal mass. Rectal examination was normal.

Abdominopelvic CT revealed :

- Significant sigmoid and colonic frame distension, the site of NHA upstream of two transitional levels, located opposite the primitive iliac bifurcation producing a spiral turn at this level.

- Measurements :
  - Sigmoid: 92 mm in diameter in anteroposterior.
  - Transverse colon: 67 mm in anteroposterior.
  - Caecum: 54 mm transverse diameter, seat of stercoral stasis.
- Dolicho-colon forming a loop at the right colonic angle.
- Significant thinning of the colonic wall, without parietal pneumatosis or wall enhancement defect.

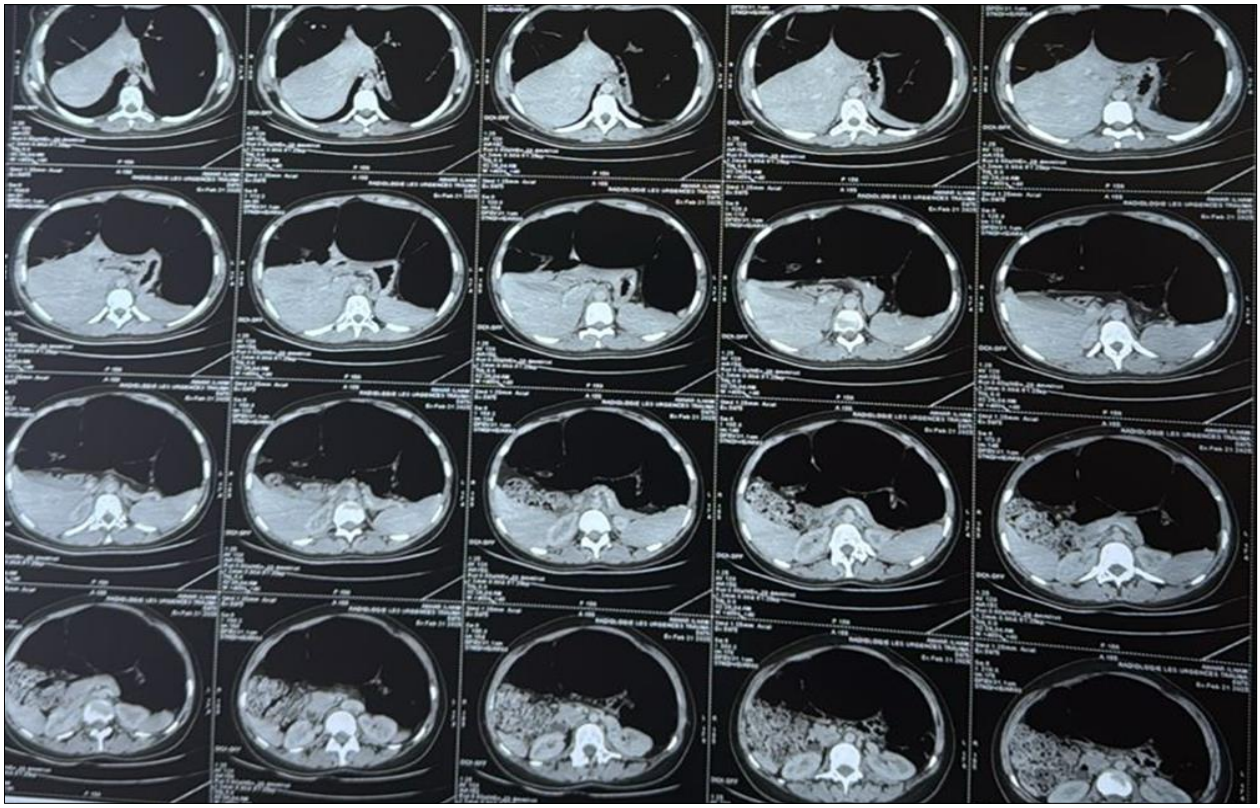

Figure 1: Computed tomography scan image

A median laparotomy was performed and the surgery exploration showed :

- A mesenteric-axial sigmoid volvulus with an anti-clockwise turn of the coil is responsible for 9 cm of colonic distension upstream.
- No signs of digestive distress

The operation consisted of :

– Segmental sigmoid resection with removal of the valvular sigmoid loop

– Sigmoid colostomy in Bouilly-Wolkman.

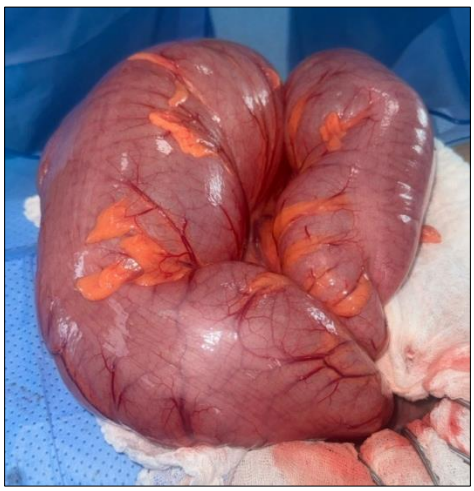

Figure 2: Perioperative image showing the colon distension

Postoperative recovery was uncomplicated. The patient received analgesics, antibiotics and preventive heparin therapy. The patient was discharged on the 6th postoperative day.

4. DISCUSSION

Colonic volvulus is more common in men over 70 years of age, with a history of chronic constipation, in people of African origin, in diabetic patients and in those with neuropsychiatric disorders [4].

At the current time, this condition affects all age groups [7]. The youngest reported patient was a premature male newborn in 2013 [6]. Other neonatal cases have been reported with an average age of 2.6 days [5].

Male predominance is seen in both children and adults [8]. In our case, it was an adolescent girl with no previous history. This entity is very rare, and few authors have described it in the literature. It is therefore essential to have a high level of suspicion based on the clinical presentation, rapid diagnosis, and appropriate management to avoid progression to ischaemia or perforation [9].

Treatment is surgical, with primary anastomosis offering some advantages over stoma for restoration of bowel continuity after urgent sigmoidectomy in sigmoid volvulus. However, the stoma is generally preferred in patients in poor health, elderly, and at intestinal risk [10].

5. CONCLUSION

Volvulus of the sigmoid colon is a rare condition in young people but can lead to serious complications if diagnosed late. Early recognition of symptoms and appropriate management, including endoscopic detorsion or surgical resection, can improve prognosis and prevent recurrence. Raising clinicians' awareness of this rare but potentially lethal condition is essential to reduce the delay in diagnosis and optimise management.

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