

Sigmoid Volvulus and Chronic Acquired Megacolon in Unusual Population Associated with Demyelinating Neuropathy, A Case Report

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ABSTRACT

Sigmoid volvulus is a frequent cause of intestinal obstruction, currently shows an incidence between 2 to 50% by demographic variables. In North America the incidence rate is 3-5%¹ with a ratio 4:1 between males and females, and most frequently presented in the 7th and 8th decades of life. This case involves a relatively frequent illness with an unusual presentation, referring to sigmoid volvulus associated with megacolon in a patient out of the ordinary age of incidence. Thus, this patient presents mild to moderate symptoms, usually it triggers the picture of sudden acute abdominal pain with rapidly evolution to worsening condition if isn't treated.²

KEYWORDS: Volvulus, sigmoid volvulus, intestinal obstruction, sigmoid colon, megacolon.

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2. INTRODUCTION

Sigmoid volvulus is a common cause of intestinal obstruction with an incidence of 2 to 50% depending on demographic variables. In North America it has an incidence of 3 to 5% with a 4:1 ratio between men and women, and occurs most frequently in the 7th and 8th decades of life.¹

Risk factors for this pathology include, but are not limited to history of abdominal surgery, colon cancer, colon metastasis, chronic inflammatory bowel disease, inguinal or abdominal wall hernias, history of radiation, presence of foreign bodies. The diagnosis is established with clinical, radiological, endoscopic and, sometimes, surgical findings.²

This pathology can present life-threatening complications such as intestinal obstruction and vascular involvement; it is more common to see vascular involvement in closed-loop occlusions. If strangulation is not treated early, it eventually progresses to ischemia and tissue infarction, with subsequent progression to necrosis, perforation, sepsis and septic shock.^{2,4}

3. PRESENTATION OF CASE

We present a case of a 37-year-old female patient, with a 11-year history of sudden vision loss, 7-year history of lower limb paraplegia, and chronic constipation without regular use of laxatives.

Patient presented to the emergency department with generalized colicky abdominal pain of moderate intensity for 7 days, associated with abdominal distention, nausea without vomiting, 24 hours prior to admission present an increase in intensity of abdominal pain with drowsiness. Physical examination revealed abdominal tenderness, absent peristalsis, abdominal hyperaesthesia, with signs of septic shock, fluid resuscitation was started in the shock room, however, without an adequate response, so dose-response vasoactive amines were started.

An abdominal x-ray was performed and revealed pathognomonic signs of sigmoid volvulus. (Figure 1)

Emergency exploratory laparotomy was performed where generalized peritonitis, sigmoid volvulus with intestinal ischemia of the sigmoid and mesosigmoid, with ischemic patches in the ascending, transverse and descending colon were found. It was decided to perform subtotal colectomy with Hartmann procedure and terminal ileostomy. (Figure 2) In the postoperative period presenting with shock, requirement use of vasoactive amines, and the need of admission to the intensive care unit. He began with high output due to terminal ileostomy in the first 12 hours of between 600 to 1000cc, with output stabilization after the first week. Beta-lactam antibiotic was used. During his hospital stay, magnetic resonance imaging of the spine was performed, where a diagnosis of chronic central myelopathy

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was made. Discharge was decided two weeks after the surgery.

The histology report showed intestine with normal characteristics with the presence of ganglion cells.

4. DISCUSSION

Sigmoid volvulus occurs when a redundant loop of sigmoid colon twists around its mesentery more than 180°. This produces a closed loop bowel obstruction. The blood supply to the affected bowel is impaired due to the twisted mesocolon, leading to ischaemia. The bowel diameter increases because of production of gas and increase of osmotic pressure, the tension in the wall increases, leading to worsening ischaemia and eventually perforation.⁵

The presentation of megacolon is similar to sigmoid volvulus. However, the difference can be recognized by an intelligent rectal examination when the examining digit enters a voluminous empty rectum.⁵

Most bowel obstructions will require hospital admission and surgical consultation. The most important step in the management of bowel obstruction is identifying the type, severity, and etiology. Prompt recognition and diagnosis are critical in improving morbidity and mortality.³

We found in the literature case reports with a small population of sigmoid volvulus cases and comparison between sigmoid volvulus associated with acquired megacolon cases, one of this report 6 cases, and only one of them with a population under 45 years of age. In another study, 96 cases of intestinal obstruction associated with megacolon were reported; however, serology was performed to rule out Chagas disease with a positive result in all of them.⁴ In this patient, serology for Chagas was not performed, although the patient denied presenting the clinical signs of acute phase of this pathology.

5. CONCLUSION

In this case we can observe a clinical picture of gradual onset, a characteristic rarely observed in sigmoid volvulus, since the majority usually debuts with abdominal pain of sudden onset; In addition to its presentation in an unconventional population by sex and age, we know that the most frequently observed population is men, starting at 40, but with a significant increase in the seventh and eighth decades of life. The

Figure

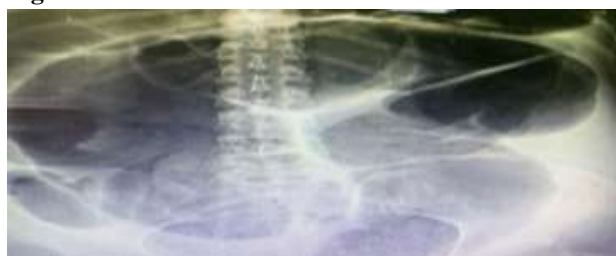


Figure 1. Abdominal X-ray in supine position: A central dilated loop (coffee bean sign) and convergence of radiopaque lines toward the site of obstruction (Frimann-Dahl's sign) are observed.

diagnosis of sigmoid volvulus was made by imaging with a standing abdominal x-ray; This diagnosis was confirmed during the surgical procedure. Colonic aganglionosis was subsequently ruled out in the histopathological study.

In conclusion, sigmoid volvulus continues to be a frequent cause of obstruction, although its incidence has greatly decreased in recent years. This patient was at an unusual age to present this diagnosis, although we suggest as the etiology in this case the history of chronic constipation associated with long-term prostration as a predisposition to a redundant and dilated colon that would have a greater risk of suffering from volvulation.

6. CONFLICTS OF INTEREST

The remaining authors have no conflicts of interest to declare

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Figure 2. Intraoperative photograph showing 360° rotation of the sigmoid with dilation of approximately 13 centimeters and ischemic changes.