Subacute pediatric de novo- transverse colonic volvulus: a rare cause of bowel obstruction case report

Abstract

Introduction: Colonic volvulus represents 3-5% of all cases of bowel obstruction in adults, being the sigmoid colon the most common site and the transverse colonic volvulus the less common site. In the pediatric population, colonic volvulus is rare enough to not know its true incidence.

Presentation of case: We present the case of a 16-year-old female with a history of chronic constipation and abdominal bloating that came to the emergency department with acute abdominal pain. Physical examination showed abdominal distension and pain in left mid-abdomen. A CT scan confirmed the presence of a transverse colonic volvulus. The patient was surgically intervened and a transverse colonic resection was done in a two-step procedure with an initially failed simple detorsion. A one-year follow up has been uneventful.

Discussion: Because of the rare presentation of transverse volvulus in children, a consensus of the management of this entity has not been established. The surgical approach is based on the clinical scenario, the bowel’s viability and the available resources.

Conclusion: It seems that the most appropriate management is bowel resection with primary anastomosis when possible.

Introduction

Bowel obstruction due to colonic volvulus in adults represents 3-5% of all cases. The most common site of colonic volvulus in adults is the sigmoid colon and transverse colonic volvulus represents less than 4% of all with a mortality of a 35%. In children, the transverse colonic volvulus is rare, with an unknown incidence. Less than 30 cases of pediatric transverse volvulus have been reported in the literature. Based on the SCARE guidelines and in the PROCESS criteria we present the rare case of a 16-year-old female diagnosed with a transverse colon volvulus managed with a two-step procedure.

Case report

A 16-year-old girl complaining of chronic constipation and abdominal bloating since early childhood presented in the emergency department with a 36-hours of abdominal pain. The plain abdominal radiograph showed dilated small and large bowel (Figure 1). A simple abdominal CT scan revealed a dilated transverse colon (14.2 cm) and a whirl sign (Figure 2). A diagnosis of a transverse colonic volvulus was done and the patient was scheduled for a surgical intervention. A laparoscopic approach was done and a transverse colonic volvulus was detorsed. The patient had an uneventful recovery and was discharged home. During her follow up, chronic constipation and abdominal bloating continued to be occasionally present, with no improvement with dietary changes and conservative measures. A follow up CT scan confirmed the presence of a dilated transverse colon. We then decided to perform an open transverse colonic resection with a primary anastomosis (Figure 3). She was discharged home on the fifth postoperative day. One-year follow up has shown no recurrence of symptoms.
Conclusion

Transverse colonic volvulus is a rare presentation of bowel obstruction in children; a high suspicion index is required. Associated conditions predisposing to this pathology include a narrow mesentery, motility disorders, absent fixation, persistent constipation and an elongated transverse colon, however further studies are required to explain the etiology of transverse volvulus in children without associated malrotation. There is no general consensus about the management of these patients and the decision must be based on the patient’s hemodynamic stability and the bowel circulatory compromise, which will determine initial resection versus detorsion. It seems that resection is the most appropriate management option to prevent recurrence of symptoms on a viable bowel, and potentially a recurrence of a transverse colonic volvulus. More data is needed to conclude which is the best management option for these patients.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

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Conflicts of interest

The author declares no conflict of interest.

References


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