CASE REPORT – OPEN ACCESS

International Journal of Surgery Case Reports 22 (2016) 94–97

Contents lists available at ScienceDirect

International Journal of Surgery Case Reports

journal homepage: www.casereports.com

Cecal bascule after spinal cord injury: A case series report

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ARTICLE INFO

Article history:
Received 19 December 2015
Received in revised form 24 March 2016
Accepted 24 March 2016
Available online 1 April 2016

Keywords:
Cecal bascule
Volvulus
Trauma
Spinal cord injury
Case report

ABSTRACT

INTRODUCTION: Cecal bascule is a rare cause of intestinal obstruction associated with upward and anterior folding of the ascending colon. We report three patients who presented with spinal cord injury complicated with a cecal bascule. Diagnosis and management of cecal bascule is discussed.

PRESENTATION OF CASES: Patient 1: 59-year-old male sustained a traumatic brain injury and cervical spinal cord injury after a motorcycle crash. He had abdominal distension and the diagnosis of cecal bascule was made. Cecopexy was performed.

Patient 2: 51-year-old male sustained an unstable C7 vertebral fracture with a cord contusion and quadriplegia after a diving incident. After an unsuccessful medical management of the colonic distension, the patient was taken for a laparotomy and cecal bascule was found. A cecostomy and a cecopexy were performed.

Patient 3: 63-year-old male was transferred after a fall. He had diffuse degenerative changes in the thoracic and lumbar spine. He was found to have a perforated cecal bascule. He had a right hemicolectomy with an ileocolic anastomosis.

DISCUSSION: We suggest the possibility of spinal cord injury being a risk factor for cecal bascule. Currently, right hemicolectomy is recommended for the treatment of cecal bascule. Cecopexy is also acceptable treatment option for a case in which the patient will be undergoing an operation with an insertion of hardware.

CONCLUSION: The diagnosis of cecal bascule should be considered for trauma patients with cecal distention without delay in order to prevent disastrous complications.

1. Introduction

Bowel problems, such as constipation and distension, occur in 27%–62% of patients with spinal cord injuries [1]. Acute abdominal pathology might be difficult to diagnose in a spinal cord injury patient due to its indolent course.

Cecal volvulus is axial twisting that involves the cecum, terminal ileum, and ascending colon. Cecal bascule is a rare type of this condition associated with upward and anterior folding of the cecum (Fig. 1) [2,3]. "Bascule", originally in French, means 'seesaw' or 'counterbalanced bridge'. Cecal bascule is an extremely rare and accounts for less than 0.1% of causes of large bowel obstruction [4,5].

Cecal bascule usually requires surgical management. It is important to make the diagnosis without delay since it can lead to severe complications like colonic perforation or gangrenous necrosis. We present three cases of cecal bascule occurring after spinal cord injury. The importance of promptly identifying this rare diagnosis and providing the appropriate management will be discussed.

2. Presentation of cases

2.1. Patient 1

59-year-old male presented after a motorcycle crash with the following injuries: traumatic brain injury, C6–C7 fracture, C5–C6 spinal cord contusion, and T6 fracture. The patient remained bedridden on the ventilator. On the fifth hospital day, abdominal distention led to an abdominal radiograph, which showed marked distension of the cecum (Fig. 2). A subsequent computed tomography (CT) scan showed an anteromedially displaced cecum with 8.2 cm dilation (Fig. 3). Laparotomy was performed for the diagnosis of cecal bascule. Intraoperative findings demonstrated that the cecum was rotated anteriorly in the right upper quadrant. Cecopexy was performed. After the patient had facial fracture repair as well as cervical and thoracic spine fixation, he tolerated a diet and was discharged 31 days after his injury. On one-month follow-up, the patient was in good condition.

2.2. Patient 2

51-year-old male was brought in after a diving incident. He sustained an unstable C7 vertebral fracture with a cord contusion and quadriplegia. On the second hospital day, he had his cervical spine

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http://dx.doi.org/10.1016/j.ijscr.2016.03.040

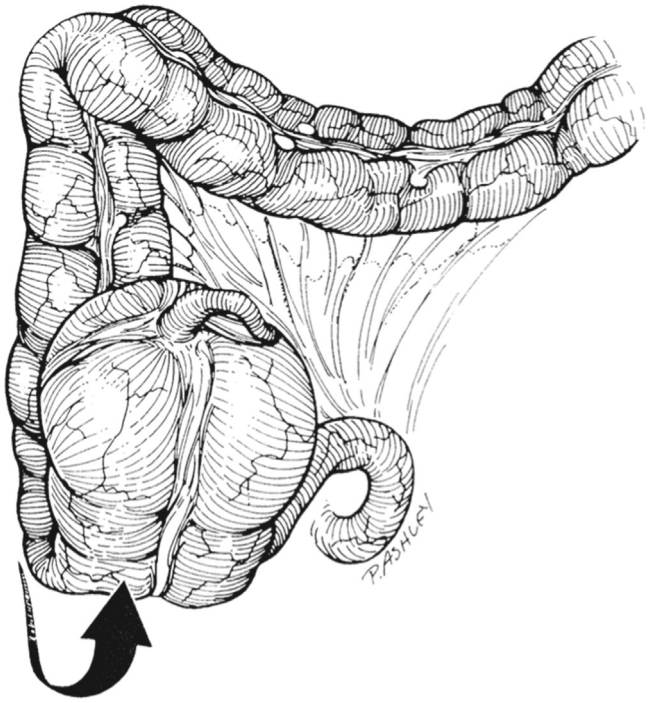

Fig. 1. Cecal bascule. The mobile cecum folds back upon itself (arrow) causing obstruction. (Reprinted with permission.)

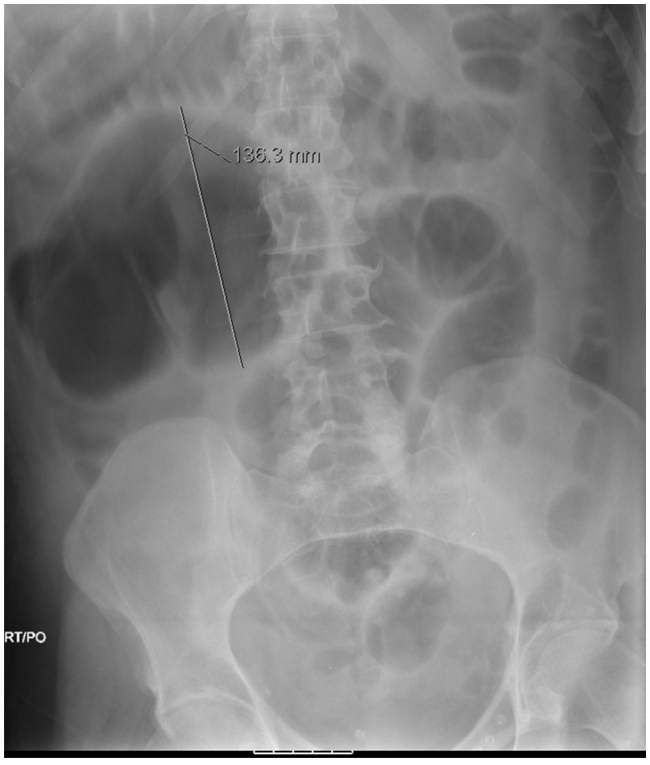

Fig. 2. Abdominal radiograph showing a distended cecum.

fixation. On the twenty-sixth hospital day, colonic distension was noted. A CT scan did not show evidence of mechanical obstruction. Colonic distension persisted after decompressive colonoscopy and intravenous neostigmine administration. After two weeks of treating presumed Ogilvie syndrome, the patient was taken for a laparotomy. He was found to have a cecal bascule (Fig. 4). The patient was treated with a cecostomy tube using a Malecot drain

Fig. 3. CT sagittal section showing upward folding of the cecum.

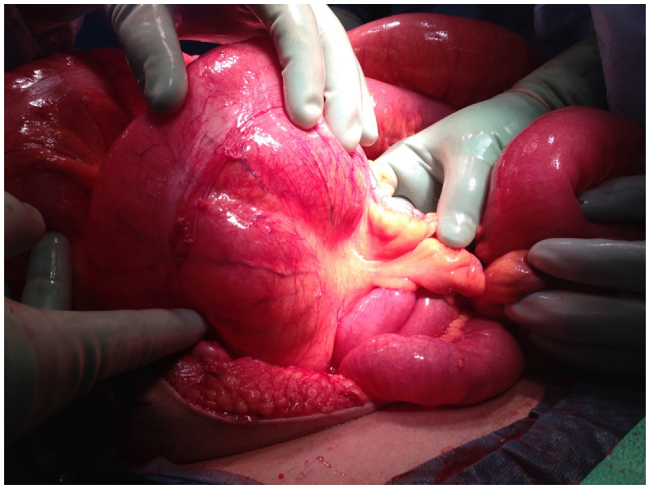

Fig. 4. Intraoperative finding of freely mobile and distended cecum.

through the appendiceal orifice and a cecopexy was performed. He was advanced to a regular diet and discharged to a rehabilitation hospital. He returned to the hospital once due to cecostomy tube dislodgement and colonic distension, which was treated with endoscopic and radiologic replacement of the cecostomy tube and decompression through the cecostomy tube. On fifteen-month follow-up, the patient was in a stable condition.

2.3. Patient 3

63-year-old male with morbid obesity (BMI = 52) was transferred from an outlying facility after a fall. He experienced weakness in both legs and then fell. He had multi-degenerative changes to the thoracic and lumbar spine but had no acute injuries. MRI showed diffuse moderate to severe degenerative narrowing of the central spinal canal and the neural foramina. On the ninth hos-