Mobile Cecum Syndrome

ROBERT L. ROGERS, M.D., USAF, MC, FRANK J. HARFORD, M.D., USAF, MC


Five cases of mobile cecum syndrome are presented. These patients all presented with chronic right lower quadrant abdominal pain with associated abdominal distention and symptomatic relief after passing flatus or having a bowel movement. Three patients had preoperative barium enemas demonstrating abnormal mobility of the cecum. On exploration, all patients were found to have the cecum and ascending colon unattached to the lateral peritoneum for 15 to 18 cm. All patients were treated by cecopexy, using a lateral peritoneal flap for fixation, and all have had relief of their pain. This technique is described and illustrated. Cecopexy is an effective method of fixing the cecum and prevents subsequent cecal volvulus. The diagnosis of mobile cecum syndrome should be considered in patients with chronic right lower quadrant pain. [Key words: Mobile cecum syndrome; Intermittent cecal volvulus; Cecopexy]

CECAL AND ASCENDING COLON VOLVULUS accounts for only about 1 per cent of mechanical bowel obstructions, but cecal volvulus is associated with significant morbidity and mortality.1,2 Mobile cecum syndrome, while anatomically and physiologically similar to cecal volvulus, is clinically different, characterized by abdominal distention and chronic periumbilical or right lower quadrant pain. Five case reports form the basis of this report.

Report of Cases

Patient 1: A 54-year-old woman presented with a four-year history of intermittent crampy right lower quadrant pain associated with abdominal distention. This pain was relieved by having a bowel movement or passing flatus. Plain films of the abdomen taken at another hospital during one of these episodes was described as showing “dilated bowel.” Just prior to surgery she had a four-day history of obstipation and crampy abdominal pain requiring large doses of narcotics and sedatives for relief. Barium enema showed a hypermobile cecum. At exploratory laparotomy, the only abnormality found was a mobile cecum with 18 cm of cecum and ascending colon unattached to the posterior abdominal wall. Cecopexy was performed using a right gutter peritoneal flap. She remains asymptomatic two years after the cecopexy.

Patient 2: A 23-year-old woman presented with a three-year history of intermittent right lower quadrant and right-sided flank pain that was worsened when she used laxatives. The pain was relieved by passing flatus or having a bowel movement. She had extensive and costly work-ups at four hospitals, but no etiology for her pain was found. Barium-enema examination showed a large cecum, which was noted to be low in the pelvis, however, no attempt at manipulation of the cecum was made by the radiologist. She was explored for chronic abdominal pain of unknown etiology. No abnormalities were found, other than a cecum and ascending colon, which were unattached to the posterior abdominal wall for 16 cm. Appendectomy and cecopexy, using a right gutter flap, were performed. The histology of the appendix was normal. She was pain-free in the postoperative period and remains so two years later.

Patient 3: An 18-year-old woman presented with episodes of crampy upper abdominal and right lower quadrant pain that she first noticed when she was a child. Two weeks prior to surgery she began having more frequent and more severe attacks of abdominal pain. The pain was associated with abdominal distention and was relieved by passing flatus. Preoperative barium-enema examination showed abnormal cecal mobility, with the cecum seen in the right lower quadrant and the left upper quadrant on different films. Exploration confirmed that she had a mobile cecum with no other abnormalities. Cecopexy, using a lateral peritoneal flap, and appendectomy were performed. The pathologic diagnosis of the appendix was “mild chronic appendicitis.” At two-year follow-up, she is asymptomatic.

Read at the meeting of the American Society of Colon and Rectal Surgeons, Boston Massachusetts, June 5 to 9, 1983.

Address reprint requests to Dr. Harford: Department of General Surgery, Wilford Hall, United States Air Force Medical Center, Lackland Air Force Base, San Antonio, Texas 78236.
Patient 4: A 22-year-old woman presented with a five-month history of right lower quadrant abdominal pain. She had an extensive work-up prior to surgery, including a trial of antibiotics for "chronic pelvic inflammatory disease." Despite this, no specific etiology for her pain was found. Preoperative barium-enema examination findings were interpreted as normal, except for the fact that her appendix did not fill. She was taken to surgery, with the diagnosis of chronic appendicitis or chronic pelvic inflammatory disease. At laparotomy the appendix was normal, but the cecum and ascending colon were unattached to the posterior abdominal wall for 15 cm. Appendectomy and cecopexy were performed using a right gutter peritoneal flap. The histology of the appendix was normal. She is asymptomatic 18 months after the cecopexy.

Patient 5: A 36-year-old woman presented with a two-year history of intermittent right-sided pain, which had become increasingly more frequent up to the time of admission. The pain was sharp in nature and was centered mainly in the right side of the abdomen, with radiation to the flank. There was some accompanying nausea but no emesis. A work-up at another medical center included an upper gastrointestinal series with small-bowel follow-through, oral cholecystogram, intravenous pyelogram (IVP), barium enema, and laparoscopy, which were all reported to be normal. An air-contrast barium enema done at our institution with manipulation by the radiologist demonstrated a very mobile right colon (Figs. 1 and 2). The patient underwent exploratory laparotomy. The only abnormality found was a right colon that was entirely on a mesentery, without any posterior fixation. Cecopexy was performed and the patient remains free of pain two years later.

Discussion

Abnormal mobility of the cecum and ascending colon has been estimated to occur in 10 to 20 per cent of the population. Wolfer et al., in an autopsy series, demonstrated this abnormal mobility to occur in 11.2 per cent of the population. Despite the high incidence of the anatomic variant, abnormal cecal mobility is an uncommon cause of an acute clinical entity.

Embryologically, this abnormality is the result of failure of the right colonic mesentery to fuse with the lateral peritoneum. As a result, the cecum and ascending colon are unattached and free to rotate, thereby causing a partial obstruction. Despite this, they usually reside in a normal anatomic position.

There are two prerequisites for cecal volvulus: a segment of mobile cecum and ascending colon and a point of fixation about which torsion may occur. Several