CECAL VOLVULUS AS A RARE CAUSE OF INTESTINAL OBSTRUCTION

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Caecal volvulus is very rare cause of the intestinal obstruction. It occurs in 1-1.5% of all intestinal obstructions. It is known that there is only one treatment in this situation which is surgery. It is classified as an obstruction because of strangulation.

We present a case of the 46 year old patient, who was operated because of intestinal obstruction. During the operation caecal volvulus has been found, with gangrene of the appendices.

Key words: caecum, caecal volvulus, intestinal obstruction

Cecal volvulus is quite rare, and potentially very dangerous, cause of intestinal obstruction. Incidence of this condition is estimated at 2.8 to 7.1 cases per million patients annually. This constitutes approximately 1-1.5% of all causes of intestinal obstruction in adults (1-6). The reported causes include excessive mobility of the cecum generally associated with incomplete visceral rotation, as well as prior surgical procedures (1-8). Surgical intervention is the only treatment.

CASE REPORT

A 46-year-old female, W.B. (hospital records No. 4758/2010) was admitted to the Clinic via referral from emergency surgical service. The patient complained of severe abdominal cramps in the umbilical region that lasted for approximately 14 hours prior to admission. The symptoms were associated with vomiting and retention of gas and stools. Medical history revealed a bout of similar symptoms one year earlier – when it resolved after administration of spasmolytics. In 2007, the patient underwent right adnexectomy due to endometrial cysts. The physical examination revealed a cone-shaped distended abdomen, localized tenderness in the umbilical and left flank regions without peritoneal signs, as well as discoordinate peristalsis. Laboratory tests revealed the following abnormalities leukocytosis (WBC of 11.44 K/mL) and low sodium at 132 mmol/L. A scout film of the abdomen showed the presence of air-fluid levels within the intestines and gas-dilated loop(s) of the large intestine displaced to the left upper quadrant (fig. 1). Barium follow-through revealed no passage of contrast into the large intestine.

The patient was qualified to undergo a surgical procedure. Intraoperative exploration showed a significantly distended cecum and the ascending colon twisted around a short rope-like adhesion connecting the right tubal remnant stump and the ileum close to the ileocecal valve (Bauhin’s valve). The intestinal wall showed evidence of ischemia but there was no evidence of necrosis (fig. 2). The adhesion both pulled and compressed the mesentery causing ischemia and secondary gangrene of the vermiform appendix (fig. 3). Moreover, a small shallow Meckel’s diverticulum was found in the distended ileum, approximately 30 cm from the cecum. The adhesion was released and the cecal volvulus was reduced restoring patency of the intestine. Additionally, appendectomy was performed and the small intestine was decompressed via a gastric tube. The postoperative course was uncomplicated. On
the fifth day after the procedure the patient was discharged home in good general condition.

The result of a histopathological examination; specimen 421012: acute gangrenous (necrotic) appendicitis.

**DISCUSSION**

Cecal volvulus is responsible for approximately 11% of all volvulus-related cases of intestinal obstruction. Cultural aspects, dietary circumstances, and patient age are suggested to contribute to the etiology of the condition. Namely, most reports from Asia (mostly from India) state that the condition affects people between 20-40 years of age, conversely, publications form the Western countries report the affected population to be older (over 53). There have been also some discrepancies when it comes to sex distribution. Depending on their geographical source, some reports state that the condition has a higher incidence among men, according to other reports incidence is higher among women (4-10). Approximately 23-53% patients diagnosed with cecal volvulus have a history of surgical procedures (1-4, 6-8). Fifty percent of those affected are reported to have experienced earlier periodic pain. Approximately 12-28% of those patients have a history of prior hospitalization. The only effective treatment of cecal volvulus is surgical intervention (1-10). In most cases, it is sufficient to simply untwist the cecum or to fix it additionally to the abdominal wall. If there is evidence of ischemia or necrosis of the cecum, it is necessary to conduct surgical resection. Perioperative mortality is estimated at approximately 0-40%, depending on the type of procedure (3-10).

The case presented here is that of a female patient who was admitted to the Clinic at an early stage of volvulus, exhibiting relatively moderate local signs. Of note is the lack of marked peritoneal signs, despite two coexisting conditions i.e. cecal volvulus and acute
gangrene of the vermiform appendix due to volvulus of appendicular mesentery. Likewise noteworthy is the mildly elevated leukocytosis. The truly disturbing abnormalities were detected in imaging examinations. An accidental abdominal X-ray film showed evidence of intestinal obstruction in the form of gas-distended loops of the large intestine in the upper left quadrant. An additional factor suggesting the possibility of intestinal obstruction was a prior gynecological surgery.

The authors would like to call attention to this uncommon cause of intestinal obstruction, which might be overlooked during the first hours after its onset and lead to serious sequelae, including cecal necrosis. This may result in a relatively high perioperative mortality rate of up to 40%.

REFERENCES


Received: 16.11.2010 r.
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