RADIOGRAPHIC SIGN CHARACTERISTIC FOR THE CECAL VOLVULUS OF I TYPE

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Key words: cecal volvulus, coverted perforation, X-ray examination, clinical case, operative finding

According to most surgeons, cecal volvulus occurs in 13% of patients with acute intestinal obstruction in 6–10% of patients with turnup and 30–44% of patients with colonic volvulus. Noting that the U.S. population volvulus is rare, found in 16 American surgeons reported 546 patients with colonic volvulus, of which 34.5% had cecal volvulus. The main predisposing factor for the development of cecal volvulus is estimated its mesentery and ileum, resulting in the whole part becomes mobile. Mobile cecum occurs in 10–12% people, even though 25% of the intestine also has sufficient mobility. Mobile cecum can be congenital or acquired, its mobility increases with age. According to D. P. Chuhrienko (1955), the importance of the confluence angle of the ileum into the blind. The transition from this acute angle into blunt, which is due to expansion and the omission of the cecum and rumen wrinkling total mesenteric cecal volvulus contributes. These same factors include inflammatory changes in the cecum deferred surgery, adhesions, tumors, pregnancy, hypercatharsis. Three types of cecal volvulus: 1) volvulus blind and ileum about their common mesentery. In these cases, the inversion involved the ascending colon, and sometimes its right bend, as well as a significant portion of the ileum; 2) cecal volvulus around its longitudinal axis. Place torsion in this case is below the confluence of the ileum to the colon, resulting in gut permeability may not be violated; 3) cecal volvulus around a transverse axis thereof. Thus cecum may reside in different parts of the abdominal cavity by the liver in the left subcostal.

According to some authors, the first type is more common bloat. D. P. Chuhrienko (1955) examined 114 patients and observed only 4 of the second and third types of bloat, and the rest became involved in the process, except for the blind, and ileum, and ascending colon, and in some patients — and transverse colon intestine. Clinical manifestations of cecal volvulus depend upon many factors and in particular on the type and degree of twisting. At cecal volvulus with iliac pretty quickly are developed all the signs of intestinal obstruction. Persistent pain in the right iliac region may remain for a long time with isolated cecal volvulus. Very early vomiting starts. From the outset, it is repeated, and it has the reflex character, due to the rich receptor field in the ileocecal region. Congestive vomiting occurs at a later date. Latency gases and chair appears in all forms of cecal volvulus and is also first reflex character.

When cecal volvulus around its longitudinal axis, it is usually in place and felt in the form of a sharply painful seal in the right iliac region. However, such an inversion can be observed in the cecum dislocated and painful seal in these cases is palpable in other parts of the abdomen, usually in the right upper quadrant. Early but also unstable symptom is hypercatharsis that at a later date followed by "silence" in the abdomen, against which you can sometimes hear the sound of a falling drop with metal shade. Very important information can be obtained by X-ray examination of the abdominal cavity. In typical cases determined swollen caecum with a wide liquid level therein. But as the cecum is often deployed, this level and bloated gut can be found in different parts of the abdominal cavity. In order to determine which body (stomach or colon) are these signs, some authors recommend the use of contrast study.

It is important to note that in some cases the cecal volvulus combined with other diseases. Primary acute appendicitis can contribute cecal volvulus, but more frequent option is the development of acute appendicitis after cecal volvulus, because this violates the blood supply to the appendix and outflow secret of its lumen.

The literature identifies a number of symptoms (Danza, Schiemann, Chuhrienko) characteristic of cecal volvulus, but the movement of the stomach to the right of the spine X-ray examination, characteristic of cecal volvulus I type in the literature we failed to find, so we decided to share their supervision.

Patient X 1978.

№7217-840

Admitted to the hospital 01:15 02.09.2012

Complaints on admission to: strong girdle pain in the epigastric region, vomiting. On her opinion she has been sick for two days. Patient associates her disease with intake of hot pepper. The disease began acutely, severe pains in the epigastric region, nausea and vomiting, therefore admitted to the surgical department of the Shahrikhon district hospital. Effect of treatment was not followed, she was transferred in Andijan. Condition for admission is moderate. Forced sitting position. Due to increased pain can not take laying position. Pulse is 80 beats per minute. BP 11070 mm Hg. Art., vesicular breathing in the lungs. Tongue moist, coated with white bloom. Abdomen is moderately distended, determined by a sharp pain in the epigastric region. Laxation auscultation, gases do not depart, micturition is free. Analyses: leukocytes — 5,7x10^9/ L, ESR — 10 mm/h, amylase in urine — 166.6 mg/(h-l), blood amylase — 160 mg/(h-l). Total protein — 57 g/L, bilirubin — 3.4 mmol/L, direct — 0 mmol/L and indirect — 3.4 mmol/L. Survey X-ray chest and abdomen: clear lung fields. Presence of free gas in abdominal area and bowl Kloybera is not found. X-ray: stagnant phenomenon cholecystitis. Presence of free fluid in the abdominal cavity is not defined. Based on the above clinical, laboratory and instrumental investigations had previously been diagnosed with acute pancreatitis, edematous-infiltrative form. Injection of baralgin, dipyrone, shpy, atropine and bilateral perirenal novocaine blockade, cleansing enema were done. Nasogastric tube was set. 5% glucose administered, 0.9% sodium chloride, contrycal 30000 Units, Ceftriaxone 1,0 x2 times intravenously, kvamatel 5.0 x2 times intravenously, then the

state has improved. Bile secretes from one of a nasogastric tube. The above treatment was repeated daily. 06.09.2012 against the background of paroxysmal pain in the epigastric region became determined thympanitis and asymmetry of the abdomen in conjunction with contoured form above navel to the left.

Survey abdominal radiography and contrast examination of the stomach detected: Kloyber bowl is defined in the epigastric region, the distal stomach moved to the right of the vertebral column (Fig. 1). Free fluid can be traced in the control ultrasound abdominal, fluid is most thickened in the lower abdomen, up to 31 mm. 06.09.2012 with the diagnosis of acute intestinal obstruction under general anesthesia produced a median laparotomy. Colon during the surgical wound adjoins with a bluish tint, expanded to a diameter of 15 cm (Fig. 2). Bowel loops brought out, they presented 360 twisted clockwise blind, ascending and right half of the colon with strangulation furrow. The right half of the colon and ileum had a long common mesentery (Fig. 3).

There is about 700 ml of hemorrhagic fluid in the stomach. After turning the course of bowel strangulation furrow counterclockwise along the upper wall at the middle portion of the colon is defined longitudinally in diameter and 7 mm hole with smooth edges, where air is released (Fig. 4).

Two-row plot gap sutured with interrupted sutures. After that, the air began to shift to the left flank of the colon. Diameter of the cecum is decreased. Appendectomy was performed in order to insurance stitched colon wall for decompression if necessary cecal wall brought out with a Dyakonova-Volkovich cut and stapled along the edges of the skin wound (Fig. 5).

After rehabilitation abdomen — left subphrenic drainage area and pelvis through a separate incision of the abdominal wall. 3 days after the operation began to withdraw gases on 4th day was a bowel movement. On 6th day the drain pipe from the left subphrenic area was removed . On 8th day — check ultrasound in the right iliac region along the drainage is determined in a small amount of liquid. Due to the

swelling of the cecum wall in the right side channel is set micro irrigator for administration of antibiotics in the postoperative period. Layer-by-layer seams on the surgical wound (Fig. 6). Kanamycin 1.0 is administered through micro irrigator 2 times a day.

Micro irrigator was removed on 6th day after reduction into the abdominal cavity wall of the cecum. In the dynamics of hemoglobin — 67,8–80/L, white blood cells — 6,3–7,8x10^9/L, ESR — 3824 mm/s. At the control of gastrointestinal contrast fluoroscopy 21.09.2012, at 15th day after surgery for reversal cecal stomach occupies its original position, i.e., to the left of the spine. Timely evacuation (Fig. 7). In a day after the colon is released from the contrast (Fig. 8). 22.09.2012 tube drainage in the pelvis was replaced by intubation. 22.09.12 г. On 16th day after the operation the patient was discharged home in a satisfactory condition. In order to prevent wound infection right iliac region around the seam within 7 days of receiving outpatient medotsef 1.0 lymphotropic

Control examination after 12 months after discharge from the hospital: no complaints, the general condition is satisfactory.

Thus, it can be noted that , together with existing symptomatic cecal volvulus Danza , Schiemann palpable and painful swollen seals in the abdominal wall in the form of "Volleyball Ball" by D. P. Chuhrienko, the movement of the distal stomach to the right of the vertebral pillar on the background of the loop defined bloated cecum with the horizontal level in the left upper quadrant, marked with contrast study of the stomach, in the observed case is characteristic radiographic signs cecal volvulus type I. Moving the distal stomach to the right of the spine can be explained by the involvement in the process of cecal volvulus of the right half of the colon as a result of traction gastrointestinal ligament right.

Our observations indicate that, although cecal volvulus is rare in the diagnosis of the patient "ileus" is necessary to consider the possibility of cecal volvulus. Based on the above case we observed a patient with cecal volvulus type I mentioned the

possibility of moving the distal stomach to the right of the spinal column due to the traction gastrointestinal ligament as a result of the involvement of bloat right half of the colon. This type can be determined by contrast examination of the stomach in the preoperative period, and moving to the right of the stomach is a characteristic radiographic signs of cecal volvulus of I type.

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Radiographic sign characteristic for the cecal volvulus of I type

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Article describes a practical case of cecal volvulus combined with a coverted perforation of the middle part of the transverse colon with long common mesentery. After their turn we managed to find a hole in the front wall of the middle part of colon, veiled during volvulus by the wall of ileum. Upon contrast examination of the stomach before the operation, we marked displacement of the distal part of stomach to the right of the spinal column, the cause of which is described in details by the authors. In the postoperative period upon contrast X-ray examination of the stomach on the 15th day after surgery, the stomach was in its starting position. Authors were able to establish the displacement of stomach to the right as a characteristic radiographic sign of the volvulus of cecum, the right part of colon and ileum. Operative finding and course of operation are consistently described and illustrated with appropriate photographs. Attempt to find out such a material in the literature failed.

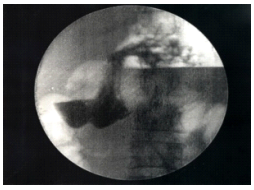

Fig. 1. Contrast examination of stomach before surgery

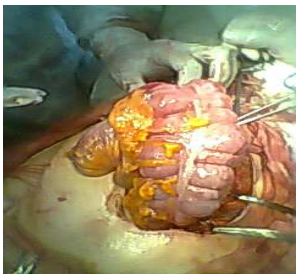

Fig. 2. Cecum view after removing it out

Fig. 3. Schematic representation of the right half of the ileum and colon (after detorsion) which have a common mesentery. Upper arrow indicates the hole perforated transverse colon, lower arrow indicated ileum

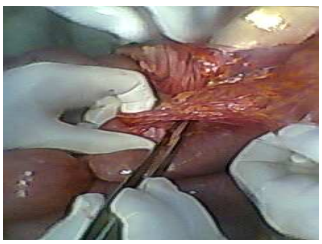

Fig. 4. Hole perforated transverse colon is indicated by tweezers

Fig. 5. Suturing the cecum to the abdominal wall for the purpose of insurance

Fig. 6. After repositioning of the cecum to the abdominal cavity

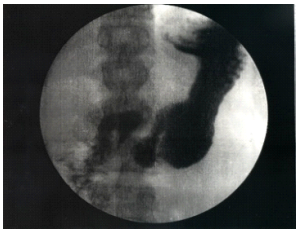

Fig. 7. Contrast examination of the stomach. 15 days after surgery. Stomach took the starting position. Motor-evacuation function is not impaired

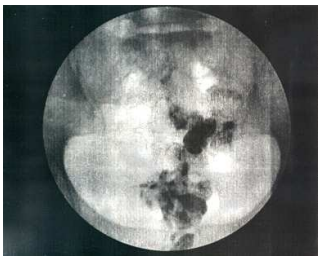

Fig. 8. Contrast examination of the stomach. 16 days after surgery. Patency is not broken, timely evacuation. The large intestine is released from contrast. Traces of contrast in the rectum