

STRANGULATED INCISIONAL RICHTER'S HERNIA COMPLICATED BY SMALL BOWEL PERFORATION AND PHLEGMON OF ANTERIOR ABDOMINAL WALL

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We reported an abnormal case of strangulated incisional Richter's hernia complicated by small bowel perforation and phlegmon of anterior abdominal wall. The observation is interesting due to the fact that now strangulated Richter's hernia is rather rare but extremely dangerous concerning the following complications due to scant clinical presentation in strangulation. We represented a case of a female patient with two-day past history of strangulation. She had a classical clinical picture of strangulated Richter's hernia (strangulation, necrosis, small bowel perforation, the anterior abdominal wall phlegmon, enterocutaneous fistula, the absence of peritonitis and peritoneal irritation signs, and the presence of paralytic ileus). The surgical management was performed followed by a patient's complete recovery.

Key words: Richter's hernia; strangulation; incisional hernia; bowel perforation; phlegmon.

Approximately 10% of all strangulated hernias are Richter's [1]. Richter's hernia (Richter's strangulation, partial enterocele, parietal hernia of the intestine) is an abdominal hernia marked by the strangulation of only a part of a circle of antimesenteric border of the intestine in hernial orifice followed by ischemia, and further — by necrosis and perforation.

The frequency of the incisional ventral hernias (IVH) formation after colorectal operations using median laparotomy approach is from 12.8 to 22% [2]. There are no data on the frequency of IVH strangulation available in the world literature; there are just several reports, according to which from 6 to 14.6 % of herniotomies for postoperative hernias, including inguinal, umbilical, femoral hernias, are performed for strangulation [3, 4].

The age of patients with Richter's hernias is usually 60–80 years. The main places of such herniation are the crural

ring (36–88%), the inguinal canal (12–36%), a postoperative scar (4–25%) [1]. Since mini-invasive techniques have been introduced in routine surgical practice there have appeared the reports on hernia formation in the sites of trocars of laparoscopic instruments (from 5 to 12 mm in diameter) [5–7] as well as in the sites of percutaneous gastrostomy tubes [8]. Moreover, Richter's hernia is the most frequent type of hernias in the sites of trocars of laparoscopic instruments [9]. In Russian-language literature we found a similar case of a giant IVH strangulation with the hernial sac phlegmon, incomplete enteric fistula and peritonitis, but without Richter's strangulation [10].

Richter's hernias are dangerous since despite incarceration their clinical presentation can be scant: in the initial stage generally there is tenderness and edema in the region of hernial orifice, erythema is possible, that explains a late visit to a doctor. At first, the hernial outpouching can be

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too small to define exactly its pathology, and when it reaches certain sizes, the clinical presentation of usual strangulated hernia develops. If a small hernia is located in a crural ring, it can mask behind fat tissue or to be taken for an enlarged lymph node. If gangrene of an intestine wall develops, there are local inflammatory signs (sharp pain, hyperemia in the area of hernial orifice, increase of local temperature) and the general symptoms of intoxication [1]. J.M. Horbach [11] showed that Richter's hernias are more inclined to cause a necrosis of an intestine wall than other types of strangulated hernias (69 versus 25%). In gangrene, there may be free perforation of the intestine, with peritonitis development, as well as the perforation into the scrotum, vulva, soft femoral tissues, and the anterior abdominal wall with phlegmon, abscess and intestinal fistula formation. There was described a case of Richter's hernia in a premature child (the 31st week of gestation) resulted in the gangrene of the intestine and the right testicle infarction [12]. There may be no bowel obstruction, it occurs only in 10% of patients [1].

The lethality in Richter's hernias is 17–21.4% [1, 13].

We provide our observation.

An 85-year-old female patient was admitted on October 6, 2011 with complaints of pains in the area of the postoperative scar of the median laparotomy approach where the hernial outpouching was observed, as well as the hyperemia in this region. According to the patient, the right hemicolectomy by median laparotomy approach for cecal carcinoma was performed in March, 2007. The medical record was absent. In October, 2007, in the middle third of the postoperative scar she noticed the presence of the hernial outpouching constantly increasing in size. She did not seek medical advice. On October 2, 2011 she noticed sharp expansion of the hernial outpouching, felt pains in the area. On October 4, 2011 she observed that the hernial outpouching was irreducible in the abdominal cavity, there was dermahemia in this region, body temperature increased up to 38 °C. She sought medical advice in Central Clinical Hospital No.2 named after N.A. Semashko and was hospitalized in the 1st surgical department.

On admission: soft stomach, in a middle third of the postoperative scar along the median line there was a hernial outpouching of dense consistency, 15×15 cm in size, not reducible in the abdominal cavity in recumbent position, and painful on palpation. A dull sound on percussion. On auscultation singular abdominal murmurs were determined. Integuments above the hernial outpouching were changed: skin hyperemia, 5×5 cm in size, in the hyperemia center there were necrotic changes of skin, the pastiness of the soft tissues in this area. Peritoneal symptoms were negative.

The associated diseases: type 2 diabetes mellitus, moderate degree, compensation; essential hypertension of the II degree, III stage, risk III; pulmonary emphysema; diffuse pulmonary fibrosis. The clinical presentation was regarded as strangulated incisional ventral hernia, the anterior abdominal wall phlegmon. The patient underwent an urgent surgery.

We performed the herniolaparotomy with a cellulocutaneous flap resected (Fig. 1) under endotracheal anesthesia. There was no effusion in the abdominal cavity. Visible intestinal loops were unremarkable. The hernial sac was multichamber. In hernial orifice there was observed the part of a small intestine



Fig. 1. A resected cellulocutaneous flap



Fig. 2. The abscess cavity of the anterior abdominal wall soft tissues

with surface adhesions. The restraining ring was dissected, parietal hernia of a small intestine at 70–75 cm from Treitz's ligament was detected. Further mobilization was followed by the opening of the abscess located in subcutaneous fat intimately connecting to the intestine; about 10 ml of odorless pus discharged (Fig. 2).

The perioperative picture was interpreted as a forming incomplete enterocutaneous fistula. The examination showed: the intestine was bloated, edematic, crimson-colored, there was observed the coin-like constriction mark, 3×3 cm in size, in the middle of which there was a perforated opening up to 0.8 cm in diameter (Fig. 3). The part of the intestine was found nonviable. We performed the resection of the small intestine up to 15 cm long: it was transected by the device UO — 60 mm (Russia). Both stumps were purse-string sutured. The “side-to-side” double layer anastomosis was made. The abdominal cavity was sanitized and drained. Due to an acute inflammatory process, a microbial contamination of the incisional wound and soft tissues of the anterior abdominal wall, a forming incomplete enterocutaneous fistula, as well as the presence of

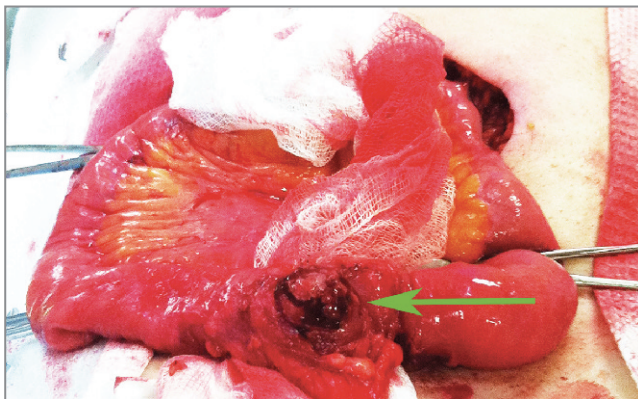


Fig. 3. Intraoperative picture: classic Richter's strangulated hernia. Green arrow — antimesenteric border, coin-like constriction mark with the presence of a perforated opening in the centre

the type 2 diabetes mellitus, a hernioplasty was not performed. The layered wound closure was made.

The postoperative period was uneventful. The patient was discharged from hospital on the 7th day. She was examined 3 and 6 months after the operation. Her condition was estimated as satisfactory. No data on the risk of hernia recurrence in the area of the postoperative scar along the median line were revealed.

Conclusion. Having a hernia over a long period of time, scant presentation at the beginning of the disease, heavy complications, long and high-cost treatment, as well as the growth of a number of Richter's hernias after laparoscopic interventions cause the relevance of the problem of their management.

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