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A RARE CASE OF GASTROINTESTINAL BLEEDING CAUSED BY SYMPTOMATIC FALSE ANEURYSM OF THE INFRARENAL ABDOMINAL AORTA

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Abstract.

This paper deals with a rare case of gastrointestinal bleeding with a favorable outcome. The patient had a penetration of abdominal aortic aneurysm revealed in the posterior wall of the duodenum with the formation of aorto-duodenal fistula and bleeding into the duodenal lumen. An anastomosis of the central jaws of the bifurcated prosthesis VASCUTEK 18. 9.9 mm was imposed end-to-end with aorta. Anastomosis of each prosthesis jaw and of common iliac arteries was imposed end-to-end on both sides. Thus, the presented clinical case demonstrates a rare case of profuse bleeding from an aneurysm of the abdominal aorta into the lumen of the gastrointestinal tract.

This observation shows good results of radical surgical treatment of this pathology despites its rarity and difficult verification in the preoperative period.

Keywords: aneurysm of the infrarenal abdominal aorta, aorto-enteric fistula, aortofemoral bifurcation prosthesis.

Introduction.

Gastrointestinal ulcer and non-ulcer bleedings are one of the most pressing problems in the abdominal surgery, moreover, the number of the latter is growing steadily [1, 2].

One of the rare causes of gastrointestinal bleeding is aorto-enteric fistula occurring with aneurysm of the abdominal aorta. A primary aorto-enteric fistula is a life-threatening complication that occurs as a result of erosion of spontaneous abdominal aortic aneurysm with penetration into the wall of the intestine and the development of massive bleeding into the lumen of the gastrointestinal tract. In 80% of cases, there is penetration into the duodenum, and in 75% of cases - into the horizontal and ascending duodenum sections, which are the most anatomically adjacent to the abdominal aorta [3-6]. In addition, abdominal aortic aneurysm may penetrate into the stomach, jejunum, ileum

and sigmoid colon. Other symptoms occur less frequently and include abdominal pain, palpable pulsing formation of the anterior abdominal wall, back pain, melena, fever or syncope [7-10].

Materials and Methods.

Patient, 76 years old, hospitalized electively on 23/10/2015 in the Department of Cardiovascular Surgery of the Regional State Funded Healthcare Facility "St. Joasaph Belgorod Regional Hospital" for aneurysm of the abdominal aorta. Complaints about the recurrent abdominal pain, the presence of pulsing formation in the epigastric region for more than 1.5 year. According to clinical and instrumental examination the patient was diagnosed with abdominal aortic aneurysm. The results of the computed tomography revealed calcifications of the abdominal aortic wall. Uneven internal contour due to parietal deposits. The aortic size at the level of the diaphragm is up to 19 mm, at the level of the renal arteries - 16 mm, an infrarenal section up to the bifurcation zone - up to 15 mm. There is a defect of anterolateral wall of the aorta for 17 mm (55 mm below the left renal artery and 52 mm below the additional right renal artery), and the aneurysm of up to 6 cm in size. The aneurysm contour has thrombotic masses up to 1 cm in thickness. Inferior vena cava is compressed from the outside. At the mouth of the celiac trunk there is a narrowing of up to 35%, at the mouth of the superior mesenteric artery - 25%, at the mouth of the left renal artery - 35%, at the mouth of the right renal artery - 50%. An additional renal artery is found right, which extends 1 cm from the side wall of the aorta below the discharge of the main renal artery. Inferior mesenteric artery is narrowed by 50%. There is an aneurysm of the splenic artery of up to 9 mm, with its walls with calcareous deposits. Common iliac artery, external iliac artery, common femoral artery, deep femoral artery and superficial femoral artery are permeable on both sides, lumen narrowing up to 30-35% due to mixed plaques (Figure 1). The patient is prepared for elective surgery.

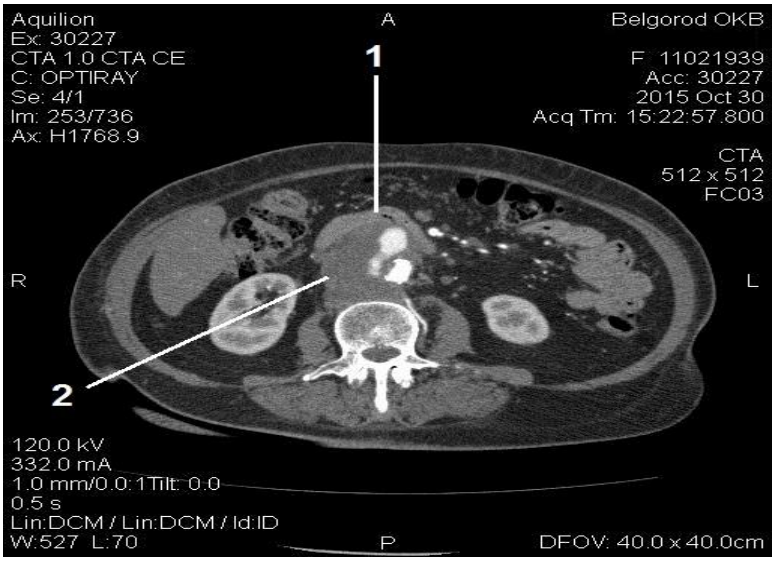

Fig. 1. SKT patient with an aneurysm of the abdominal aorta (1 is the horizontal duodenum, 2 – aneurysm).

Against the complete well-being, the patient had complaints about rapidly developed weakness, profuse vomiting with unmodified clotted blood up to 2-3 liters. The examination revealed pale skin, wet by touch. Breathing shallow, rapid, respiratory rate - 23 per minute, BP 80/40 mm Hg., HR - 116 bpm. In the course of examination, the patient had a massive gastrointestinal bleeding and hemorrhagic shock. The patient was urgently transported to the operating room. A total median laparotomy was conducted. No blood was found in the abdomen and retroperitoneal space. Small bowel loops are stretched, filled with blood. In the area of the horizontal branch of the duodenum there is an infiltration with the involved 8 cm pulsing formation. The separation of the latter allowed us to reveal the penetration of the abdominal aortic aneurysm in the posterior wall of the horizontal branch of the duodenum, with the formation of aorto-duodenal fistula and bleeding into the lumen of the duodenum. The neck of the aneurysm was isolated, and a Satinsky clamp was imposed. The bleeding was staunched. Duodenography was conducted. Both common iliac arteries were isolated with small aortic clamps superimposed thereto. Further revision of aneurysm revealed a 1-2 cm defect of anterior aneurysm wall. Aneurysm cavity was opened, and an aneurismal bowl was removed. The mouths of the lumbar and sacral arteries were stitched with PROLENE 3-0 thread. An anastomosis of the central jaws of the bifurcated prosthesis VASCUTEK 18. with aorta of 9.9 mm was imposed end-to-end with PROLENE 3.0 thread. The mouths of both common iliac arteries were ligated with a double nylon thread №5. On both sides, we consistently conducted a common iliac artery arteriotomy of 2.5 cm, thrombectomy with Fogarty catheter, and obtained "fresh" blood clots. Anastomosis of each prosthesis jaw and of common iliac arteries was imposed end-to-end on both sides with PROLENE 5.0 thread. The prosthesis was covered with a wall of the aneurysmal sac and peritonized. The abdomen was drained. Hemostasis monitoring. Layered suturing of the laparotomic wound. Aseptic dressing. Intraoperative and postoperative blood and fresh frozen plasma transfusions was conducted. The postoperative period was unremarkable. On day 23, the patient was discharged in satisfactory condition. Examination was conducted after 3 months, with no complaints.

Conclusion.

Thus, the presented clinical case demonstrates a rare case of massive bleeding from an aneurysm of the abdominal aorta into the lumen of the gastrointestinal tract. The foreign literature has publications describing the primary aorto-enteric fistula resulting from the spontaneous erosion of the abdominal aortic aneurysm with penetration into the wall of the intestine and the development of massive bleeding into the lumen of the gastrointestinal tract, however, the reports of such states with a favorable outcome remain single.

This observation shows the good results of surgical treatment of aorto-duodenal fistula resulting from the spontaneous erosion of the abdominal aortic aneurysm with penetration into the wall of the intestine and the development of massive bleeding into the lumen of the gastrointestinal tract despite the diagnosis rarity and difficulty.

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