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TRICHOBEZOARS OF THE STOMACH AND JEJUNUM, COMPLICATED BY PARTIAL OBTURATION INTESTINAL OBSTRUCTION

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The article describes the stages of diagnostics and treatment of a child with the stomach and jejunum trichobezoars, starting from the regional hospital and ending with a children's medical republican institution. The operation, which was performed 2 days after the child's hospitalization, consisted in enterotomy, gastrotomy and the trichobezoars extraction. The postoperative period was uneventful. The significant difficulty in trichobezoars recognition in children requires the development of an action algorithm at all stages of the diagnostic process.

Keywords: child, trichobezoar, stomach, jejunum, surgical treatment

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Introduction. Tumor-like formations called bezoars are quite rare foreign bodies of the gastrointestinal tract [1]. Moreover, most often in children, there are trichobezoars, which form generally in the stomach and more rarely in the small intestine in adolescent girls [2]. The presence of long hair, the habit of biting off and chewing one's own hair are the main reasons for the formation of these «pseudotumors» [3–5].

Timely diagnosis of this pathology is a great problem for pediatric surgeons, which is associated with a long course, ambiguity and non-specificity of clinical symptoms [6]. The use of instrumental examination methods does not always allow to correctly interpret the etiological factor, and the disease diagnosis is often associated with the development of intra-abdominal complications and is carried out on the operating-table [7, 8].

Clinical case. On the 26th of February, 2020, an 8-year-old girl was admitted to the Children's Republican Clinical Hospital of the Saransk city with complaints of abdominal pain, repeated vomiting, lack of appetite, weakness, lethargy, dry mouth, fever up to 37.2 °C. It was possible to find out from the anamnesis that these symptoms appeared on 8th of February, 2020. Two days after the disease onset, the child's parents applied for aid in the regional hospital of Ardatov city, in which the patient was examined by a surgeon. No data were established for acute surgical pathology. The girl was hospitalized to the specified medical institution with a diagnosis of acute peribronchitis, chronic pancreatitis, exacerbation stage. The patient received infusion and antibacterial therapy. As a result of the treatment, the patient's condition improved. Ultrasound and survey radiography of the abdominal organs did not reveal any pathology. According to the results of the general and biochemical

blood test, moderate leukocytosis, insignificant increase in ESR and the α -amylase level were noted. On 19th of February, 2020, the girl was discharged from the hospital with recovery. After 6 days, repeated vomiting and cramping abdominal pain reappeared. The patient readmitted to the regional hospital, from where she was referred to the Children's Republican Clinical Hospital of the Saransk city and hospitalized in the intensive care unit.

An objective examination revealed moderate pain in the epigastric region. The abdomen remained soft, accessible for deep palpation, not bloated. A dense, slightly displaced, painless formation was palpable on the right in the hypogastrium. The stool absence within 2 days attracted attention. The blood test indicated an increase in the number of leukocytes, erythrocytes, hemoglobin and hematocrit.

The maximum values of these indicators were determined on the first day after hospitalization and were $20.2 \cdot 10^9/L$, $5.62 \cdot 10^{12}/L$, 167 g/L and 48.1%, respectively. An increase in glucose levels ($6.15\text{--}7.95\text{ mmol/L}$) was noted. This indicator against the background of ongoing therapy returned to normal only 3 days after the patient was admitted to the hospital. An enlargement in the coarse protein fraction and a decrease in the activity of blood α -amylase were observed.

On 26th of February, 2020, according to the results of a survey X-ray examination of the abdominal cavity, no pathology was found. Ultrasound of the abdominal organs turned out to be a more informative diagnostic method and made it possible to suspect intestinal obstruction. Esophagogastroduodenoscopy diagnosed II-A degree of reflux esophagitis, superficial gastritis, gastric phyto-trichobezoar, III degree of duodeno-gastric reflux, superficial bulbitis, indirect signs of pancreato-biliary pathology, abnormal gastric motility. Routine surgical intervention was recommended.

On 28th of February, 2020, surgical treatment was in performing an upper median laparotomy. During the revision of the abdominal



Fig. 1. Ovoid formation, 8×3 cm in the jejunum lumen



Fig. 2. Extracted hairball from the stomach lumen

organs, a tightly elastic, immobile, ovoid formation, 8 cm and 3 cm in size was detected in the jejunum lumen (fig. 1). A longitudinal enterotomy was performed with the removal of foreign body (hairball) from the intestine lumen and subsequent suturing of the wound. A similar formation of 15 cm and 8 cm in size was found in the stomach. Gastrotomy in the non-vascular zone, removal of a foreign body and restoration of the integrity of the organ wall were carried out (fig. 2). After the operation, the girl was in the intensive care unit for 4 days, where she received conservative therapy and local treatment. After the specified period, the child was transferred to the surgical department. The sutures were removed on the eighth day of the postoperative period.

Discussions. Trichobezoars are very rare as foreign bodies of the gastrointestinal tract [1]. Prolonged asymptomatic course, the ability to migrate these formations complicates the disease verification significantly [6]. This generates frequent diagnostic errors and leads to the wrong choice of treatment tactics [8].

The considered clinical case of trichobezoars in a girl emphasizes the managing complexity of such patients, especially during their initial appeal for medical care. Clinical, laboratory and instrumental methods including ultrasound and X-ray examination of the abdominal organs did not reveal the etiological factor of the disease. The endoscopic examination of the stomach and duodenum gave more information about the nature of the pathological process, but the final diagnosis was established only during the surgical intervention.

Conclusions. 1. Only an endoscopic examination of the stomach makes it possible to determine the trichobezoar presence.

2. The described clinical observation indicates a significant difficulty to recognize trichobezoars in the jejunum at all stages of the diagnostic search.

Conflict of interest

The author declares no conflict of interest.

Compliance with ethical principles

The author confirms that they respect the rights of the people participated in the study, including obtaining informed consent when it is necessary, and the rules of treatment of animals when they are used in the study. Author Guidelines contains the detailed information.

Information about consent

The consent of the legal representative of a child under the age of 15 years was given to provide a description of the clinical case in print and on the Internet for scientific and educational purposes.

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