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INFREQUENT COMBINATION OF THE CONGENITAL PYLOROSTENOSIS AND MEMBRANE OF PYLORIC DEPARTMENT OF THE STOMACH (clinical case)

ABSTRACT

The exceptional case from clinical practice – a combination of a congenital hypertrophic pylorostenosis to a membrane of the piloryc channel of a stomach at the child of an age of 1 month who was admitted with an X-ray and clinic picture of a partial high intestinal obstruction is presented. The membrane of the piloryc channel of a stomach is found during a repeated operative measure when performing intraoperative fibrogastroscopy.

Keywords: membrane of the piloryc channel, congenital hypertrophic pylorostenosis, high intestinal obstruction, obstruction of a stomach.

INTRODUCTION

Obstruction of the stomach in children is manifested by the following main symptoms: vomiting, bloating in the epigastric region, hypotrophy. Of the listed symptoms in the first place is, of course, vomiting without an admixture of bile in the vomit mass, which is the main distinguishing sign of stomach obstruction. More often this symptom in children speaks about hypertrophic pylorostenosis. However, signs of obstruction can also be caused by other causes of an innate nature, which are less common and not always acute. It is the membrane of the antrum of the stomach, the doubling of the stomach [1]. The frequency of congenital diseases of the digestive system continues to increase steadily every year [2]. Congenital partial obstruction of the stomach caused by the prepyloric membrane, refers to the rare malformations of the gastrointestinal tract in children with a frequency of occurrence of 1 case per 4000 labors [3, 4].

In available literature we did not find a similar combination of defects of the top departments of digestive tract.

Clinical case. Boy E., 1 month, admitted on January 13, 2017 in the surgical department with a diagnosis of congenital hypertrophic pylorostenosis. A boy from the 1st pregnancy, which was taking place against a background of toxicosis in the 2-3 trimester. First labor is on time, independent. Weight at birth is 3,080 grams, height is 48 cm. It is known from an anamnesis that the baby had breast feeding up to 3 weeks. From the second week after birth, mother notes «projectile» vomiting after each feeding, without any bile, «curdled» milk. There was a gradual loss of body weight, constipations were observed. He was examined by the district pediatrician with transfer to the antireflux milk formula «Semilak»; he was hospitalized in the central regional hospital. The ultrasound examination of the stomach, the pyloric part showed that there was anechogonic liquid with hyperechogonic inclusion contents in the volume of about 70 ml in the stomach, the lumen of the stomach is significantly expanded, the rosette of the cardia is closed, the diameter of the rosette is 11 mm, the walls are up to 5 mm. The pylorus is up to 12 mm in diameter, the thickness of the muscle layer is up to 6 mm, the narrowing zone is visible for up to 3.5-4 cm, the lumen is considerably narrowed, in the lumen a thin band with a faint echo. The conclusion is the signs of congenital hypertrophic pylorostenosis. Radiography with barium meal showed that there is an enlarged stomach with a level of fluid on the overview radiograph of the abdominal cavity, a sufficient number of gases in the intestine, in pictures with contrast material, prolonged retention of barium in the enlarged stomach, «segmenting the peristalsis» of the stomach, reduced intestinal gas filling (Fig. 1) . The child is transferred for further treatment to the surgical department of the Pediatric Center.

At admission, the condition of the child is severe, due to malformations, exsicosis, severe hypotrophy. The integument is clean, subic, and the skin turgor is sharply reduced. The thorax of the correct form, symmetrically participates in the act of breathing. Auscultatory in the lungs, breathing is puerile, carried out in all departments, there is no wheezing. Heart tone is clear, sonorous. HR of 126 per minute. The belly is sunken, a symptom of the «hourglass» is noted. When palpation in the right hypochondrium, there is an oval, mobile, dense formation. Stool has a tendency to constipation. The child was hospitalized in the intensive care unit for preoperative preparation. The pylorus was examined by ultrasound, an anechoic, rounded formation, 35x20 mm in diameter, with heterogeneous contents (with a hyperechoic level) was found in the epigastrium. After preoperative preparation, on January 16, 2017 the boy was taken for an operation with a diagnosis: congenital hypertrophic pylorostenosis. A traditional extrinsic pyloromyotomy according to Fred-Ramstedt was performed. In the early postoperative period, repeated vomiting without bile was retained, it was impossible to begin enteral load. On January 18, 2017 fibrogastroscopy was performed, which revealed erosive-hemorrhagic esophagitis, pilorospazm. Consultation of a neurologist showed PA CNS of a mixed genesis, spastic tetraparesis. On January 19, 2017

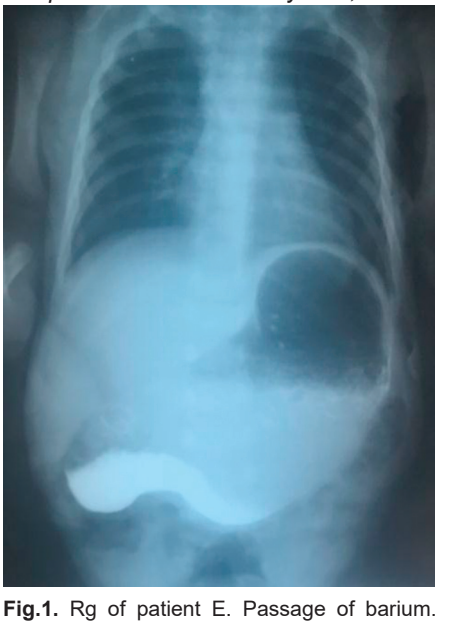

Fig.1. Rg of patient E. Passage of barium. Extended stomach.

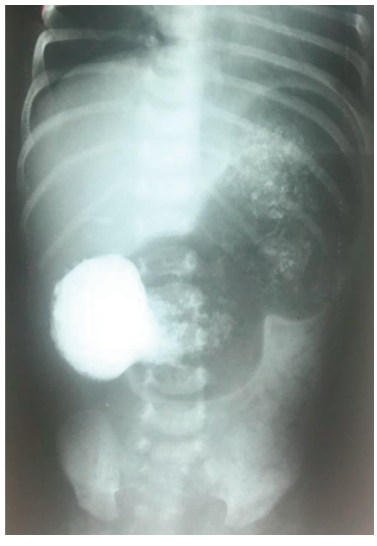

Fig.2. Segmenting peristalsis of the stomach.

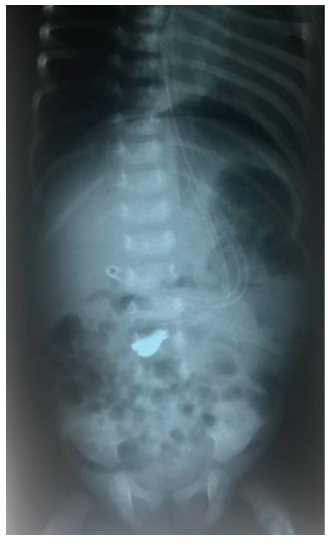

Fig.3. Satisfactory gas filling of the intestinal loops, «reduction» of the stomach

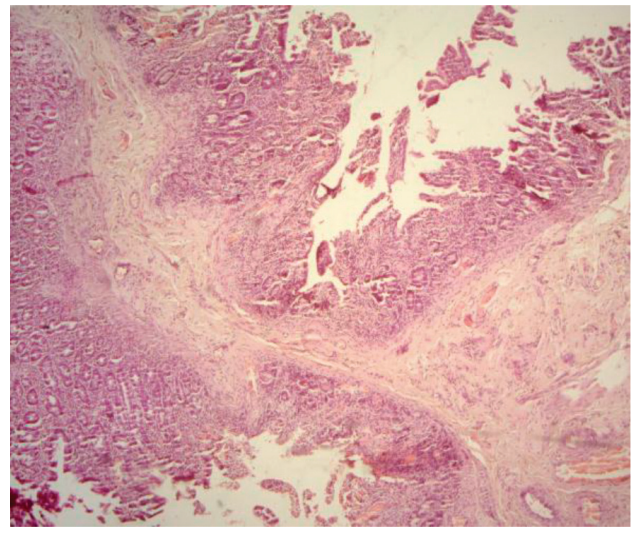

Fig. 4 Prepiloric membrane preparation after membrane excision.

passage of barium was held, in which a large amount of contrast was retained in the stomach, in the loops of the intestine was not determined. A consultation was held, in which it was decided to take the child for a second operation because of the ineffectiveness of the primary pyloromyotomy. Relaparotomy was performed on January 20, 2017: a pyloric section of the stomach with dimensions of 3.0x2.0 cm, whitish, cartilaginous density was excreted into the wound. The site of the previous pyloromyotomy was been examined, a depth and length cut was sufficient, but there was no bulging of the mucosa, which was regarded by us as insufficient dilution of the edges. The wound of the pylorus was sewn. Above and below, 2 extra-porous pyloromyotomies by Ramstedt were performed. On January 21, 2017 enteral load was started, while vomiting was repeated up to 10 times a day, there was no stool. The patient was transferred to full parenteral nutrition. An overview X-ray of the abdominal cavity was performed, in which there was no evacuation of the contrast from the stomach, the gas filling of the intestine was also not detected, the stomach was sharply expanded, and its segmenting peristalsis was present (Fig. 2). On January 23, 2017 persisting phenomena of gastric obstruction are regarded as combined pre-pyloric obstruction, the membrane with a pinhole, undiagnosed earlier, was not excluded. On January 24, 2017, the patient was taken to second operation, intraoperative fibrogastroscopy was performed to clarify the nature of the pathology, according to which the pylorus was opened in the initial department, then the apparatus in duodenum did not pass. The stitches from the first suture pyloromyotomy have been loosened, the pyloric canal mucosa has been opened. During the audit, an obstacle was found in the form of a dense membrane with a dotted hole in the prepyloric section, a circular section of the membrane was made. Enteric feeding tube was delivered to the duodenum, gastroduodenoanastomosis was applied. Postoperative diagnosis was congenital hypertrophic pylorostenosis, membrane of the prepyloric stomach. The control radiograph of the abdominal cavity in the intestinal loops showed sufficient gas filling, the stomach was «contracted» (Fig. 3). The course of the postoperative period was smooth. Histological conclusion: the material was represented by the mucous prepyloric section of the stomach with a submucosal layer, the muscle layer was absent (Fig. 4). On February 02, 2017 the child was discharged in a satisfactory state with an increase in body weight.

CONCLUSION

The described case shows the difficulty of timely diagnosis of the membrane of the prepiloric stomach in children, especially when this defect is combined with congenital hypertrophic pylorostenosis. Specialists dealing with the treatment of congenital malformations of the gastrointestinal tract should remember the possible combination of gastric malformations. At continued vomiting against the background of adequately performed pyloromyotomy and exclusion of non-surgical reasons for postoperative regurgitation, repeated intervention with mandatory intraoperative fibrogastroscopy is indicated.

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THE EXPERIENCE OF TRANSANAL ENDORECTAL RESECTION AND COLONIC RELEGATION AT HIRSCHPRUNG'S DISEASE IN CHILDREN

ABSTRACT

In the surgical department of the Pediatric Center, since 2012, the method of transanal endorectal colonic relegation at the recto-sigmoid form of Hirschsprung's disease according to De La Torre-Mondraqon has been approved and introduced. Ten patients were treated by this method. Earlier, in the treatment of Hirschsprung's disease, methods of Duhamel, Soave-Lenyushkin, and Soave-Bolei were used. The operations were performed through the abdominal perineal access. Totally 32 operations were performed. A comparative evaluation of the outcomes of radical operations showed that in abdominal perineal proctoplasty of Soave-Lenyushkin and Duhamel the patients often have postoperative complications such as postoperative peritonitis, enterocolitis, encopresis, «residual» zone of aganglionosis, which required repeated operations and a long «cost» recovery. Similar complications were not observed after the transanal relegation of De La Torre-Mondraqon.

Keywords: children, aganglionosis, Hirschsprung's disease, complication, anastomosis.

INTRODUCTION

The most common cause of constipation of organic nature in children is Hirschsprung's disease. Treatment of Hirschsprung's disease remains an actual problem of pediatric surgery, despite of the 100th anniversary of the development of pathogenetic well-founded method of correction of the defect [1-3]. The problem of complications after primary radical operation in many patients is topical, some of them need repeated operations. The overall incidence of complications according to different authors is from 22.7% to 38.5%, including stool incontinence from 3.6% to 69%, constipation from 1.6% to 25%, enterocolitis from 1.4% to 28.5%, perianal dermatitis from 2.7% to 27.7% [1, 3, 4]. A large number of various methods of surgical correction of Hirschsprung's disease has been proposed, linked to a reduction of postoperative complications. Currently, the main task of the modern approach to the surgical treatment of colon agangliosis is the minimization of the trauma of a radical operation, primarily by developing various minimally invasive modifications of the widely known techniques of Svenson, Soave, Duhamel. Children's surgeons are trying to find a certain compromise in the differential approach to choosing the method of surgery. The most recent achievement is the radical operation of transanal endorectal colonic relegation without laparotomy, described in 1998 by De la Torre Mondragon and Ortega, which gives excellent results in the recto-sigmoid form of Hirschsprung's disease [4].

MATERIALS AND METHODS OF RESEARCH

For the period 2012-2017 years 10 surgical interventions using the De La Torre-Mondraqon method of transanal endorectal colonic relegation in rectal and recto-sigmoid forms of Hirschsprung's disease were carried out. The age of children ranged from 10 months up to 8 years. Boys prevailed - 9 (90.0%), the girl was alone. Children with extended forms are excluded from this study.

For a comparative study of the results of surgical treatment of Hirschsprung's disease in the surgical department of the Pediatric Center, Republican Hospital №1, National Centre of Medicine, we conducted a retrospective analysis of the outcomes of surgical treatment using the Duhamel and Soave method in the modifications from 1991 to 2011. For that period 32 children were operated (4 by Duhamel method, 28 surgical interventions by Soave modifications).

At the operation by the De La Torre-Mondraqon method the preoperative examination included: general clinical tests, fecal dysbacteriosis, coprogram, irrigoscopy, full-layer biopsy of the rectum (in 2 cases), fibro-esophagogastroduodenoscopy, ultrasound examination of the abdominal cavity organs, ultrasound examination of the heart, brain, examination of the gastroenterologist, neurologist. According to the survey, all children were diagnosed with Hirschsprung's disease with a preliminary picture of the prevalence of aganglionosis zone. The following forms were met among 10 children: rectal - 2 cases; recto-sigmoid - 8.

The complex of preoperative preparation included: assessment of hypotrophy and correction of nutritive status, correction of revealed hemostasis disorders, thorough sanitation and cleansing of the intestines with purifying and siphon enemas, selective decontamination of the intestine with orally administered antimicrobial agents.

All 10 children underwent transanal endorectal reduction of the colon with superposition of a colanal anastomosis. The essence of the operation was as follows: a minimally invasive approach based on transanal endorectal mobilization and reduction of the