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TREATMENT OF COMPLICATIONS IN NEWBORN WITH LOWER INTESTINAL OBSTRUCTION IN CHILDREN

Yuldashev M. A.
Senior Lecturer, Department of Pediatric Surgery,
Andijan State Medical Institute, Andijan, Uzbekistan

Gafurov A. A.
Doctor of Medical Sciences, Professor of the Department of Pediatric Surgery,
Andijan State Medical Institute, Andijan, Uzbekistan

RESUME

A detailed analysis of various scientific studies over the past twenty years, mainly in the United States of America, reflected a significant incidence of children with anorectal defects from parents who depend on nicotine and drink alcohol, mothers suffering from obesity and diabetes mellitus (including gestational).

Congenital intestinal obstruction (CHI) occurs with malformations of the gastrointestinal tract, disorders of the innervation of the intestinal wall, and genetic diseases. The main signs of pathology: repeated vomiting with an admixture of green color, lack of stool, bloating and soreness of the abdomen.

Keywords: internal hernias, neonatal surgery, transabdominal ultrasound examination, newborn child, pyoinflammatory complications.

RELEVANCE

Congenital intestinal obstruction in children older than 1 year, and even more so in adults, is a rare disease. As a rule, this is due to a violation of the rotation of the intestine in the prenatal period, the presence of Ledd's syndrome, internal hernias.

Clinically, patients experience chronic abdominal pain or manifestations in the form of acute intestinal obstruction, usually accompanied by intestinal volvulus.

In the diagnosis, various x-ray methods are most often used. But even a surgeon, and even more so a doctor of another specialty, can be difficult to suspect a congenital disease in an adult.

The most common pathology in neonatal surgery is congenital intestinal obstruction, which is recorded with a frequency of 1:2000 newborns. At the same time, to date, prognostic criteria for the course of intestinal obstruction, leading to the development of local and systemic complications, have not been sufficiently developed. It seems promising to use transabdominal ultrasound examination of the intestine as a non-invasive and highly informative method that will provide information about the disease in a few minutes and, most importantly, painlessly for a newborn child.

In addition, the development of surgery for malformations of the gastrointestinal tract in newborns is inevitably accompanied by an increase in the frequency of postoperative purulent-inflammatory complications. At the same time, postoperative complications lead to the development of multiple organ failure syndrome and are the main cause of death of newborns in this group.

Therefore, predicting the early stages of the development of complications in the perioperative period is extremely important. A number of researchers attach great importance in determining the development of inflammatory bowel diseases to a protein that increases cell permeability and factors that determine the permeability of the intestinal wall (an intestinal form of a protein that binds fatty acids and zonulin).

PURPOSE OF THE STUDY

Improving the efficiency of medical care for newborns with congenital intestinal obstruction by improving the treatment of complications.

MATERIAL AND RESEARCH METHODS

The morphological picture was analyzed in 37 children operated on for ARM. The structural features of the wall of the rectum, soft tissues of the fistula area and the skin of the perineum were studied in 37 samples with various anorectal malformations. Sections for histomorphological verification were taken at various sites from the atrezed end of the intestine, at the site of the transition of the intestine into the fistula, at the border of the transition of the fistula tract into the intestinal wall (cone) and the extended caecum, as well as from the wall of the fistula itself and the anastomosis with the genitourinary tract.

RESEARCH RESULTS

Intestinal obstruction in 100 (46.5%) newborns was due to a violation of the formation of the lumen of the intestinal tube. External compression of the intestine by adhesions, adjacent organs or their pathological formations was observed in 34 (15.8%) patients. In 69 (32.1%) children, violations of rotation and fixation of the mesentery of the middle intestine or individual sections of the small or large intestine were recorded. In 5 (2.3%) cases, the cause of ECI was a combination of several variants of intestinal tube formation disorders (atresia and stenosis or atresia and membrane) in its individual sections, which indicates a multi-local, mixed form of intestinal obstruction of congenital origin. In 7 (3.3%) patients, signs of low intestinal obstruction were due to cystic fibrosis of the pancreas in the form of meconium ileus. At high CI, anatomical obstacles were located in the duodenum, causing complete or partial obstruction, the causes of which were: malformations of the duodenum (atresia - in 4 (4.4%), stenosis - in 5 (5.6%)); membranes - in 12 (13.3%)); external compression of the duodenum by periduodenal adhesions (in one (1.1%) patient) and annular or pincer-shaped pancreas (in 25 (27.8%) newborns). A mixed form of high CI was noted in one (1.1%) newborn. In 42 (46.7%) cases, high intestinal obstruction was due to malrotation.

The most common cause of low intestinal obstruction was atresia in 70 (56.0%) and intestinal stenosis in 3 (2.4%) with different localization within the jejunum in 18 (24.7%); ileum - in 45 (61.6%) and large intestine - in 10 (13.7%). The membranous form of obstruction of the above localizations was noted in 6 (4.8%) newborns. In 27 (21.6%) children, various forms of intestinal malrotation were accompanied by clinical and radiological signs of low intestinal obstruction. Meconium ileus was detected in 7 (5.6%) patients, external intestinal compression — in 8 (6.4%) patients. Low intestinal obstruction with multiple localization along the small or large intestine occurred in 4 (3.2%) cases.

During surgical intervention in newborns with VNK, a thorough revision of the entire intestine was carried out, starting with the duodenum, surrounding organs, the mesentery of the intestine and peritoneal formations for the presence of pathological holes and pockets. As a rule, the elimination of the identified disorders can prevent possible causes of recurrent intestinal obstruction. The tactics were differentiated in each individual case, most aimed at correcting the identified components that disrupt the normal functioning and further growth and development of the intestine in a growing child's body.

With duodenal obstruction, the following operations were performed: duodeno-duodenal anastomosis according to Kocher — in 25; duodeno-duodenoanastomosis according to Kimura - in 3; duodeno-jejunoanastomosis - in 6 cases. Duodenotomy with excision of the membrane - in 12 cases and with excision of stenosis - in 1 case. In all cases, duodenoplasty was used in an oblique transverse direction. In one patient with external obstruction of the duodenum caused by periduodenal adhesions, the bands were excised with duodenum mobilization.

With low intestinal obstruction, depending on the nature of the pathology and the resulting complications, radical or palliative surgical interventions were applied. The method of choice for surgical intervention for membranous obstruction of the small and large intestine was entero- or colostomy with excision of the membrane. With a large difference between the proximal and distal segments, in relation to the localization of the membrane, in 6 cases, a short resection of the intestine of the supporting membrane was required, with the imposition of an end-to-end anastomosis or single-barrel or double ileostomy.

The developed and implemented algorithm for predicting the development of complications in newborns with congenital intestinal obstruction allows for early clinical diagnosis of purulent-inflammatory complications in the postoperative period and significantly reduces the incidence of complications and the number of deaths.

The dynamics of the concentration of an antimicrobial protein that increases the permeability of cells and factors that determine the permeability of the intestinal wall (an intestinal form of a protein that binds fatty acids and zonulin) in patients with congenital intestinal obstruction makes it possible to predict the development of pyoinflammatory complications and serves as the basis for correcting therapeutic tactics at various stages of treatment .

Dynamic management of newborns with the use of ultrasound diagnostics in various forms of congenital intestinal obstruction allows optimizing the early diagnosis of intestinal obstruction and its complications.

CONCLUSION

Thus, congenital intestinal obstruction in older children, and sometimes in adults, is a very rare disease that can present with symptoms similar to those of other diseases of the gastrointestinal tract. The correct assessment and interpretation of such signs should be carried out by a doctor of any specialty, which will reduce the number of diagnostic and tactical errors in the case of persistent vomiting syndrome in children and adults.

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