

## FEATURES OF DIAGNOSIS AND TREATMENT OF POSTOPERATIVE ADHESIVE COMPLICATIONS IN CHILDREN

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**Annotation:** The algorithm of diagnostics and the treatment disease, an algorithm for diagnosis and treatment has been developed, adhesive disease is developed on experience of including assessment of clinical and echographic treatment of 301 children. Algorithm basis have compictures of the disease, conducting original curpounded sonography of the abdomen, antiadhesive sa anti-adhesive therapy and laparoscopic therapy and laparoscopic adhesiolysis. Effi cacy adhesiolysis. The effectiveness of treatment of patients with adhesive desease has adhesive disease in combination with surgical interventions was 92.4% in a complex with surgical interventions.

**Key words:** an adhesive desease, adhesive therapy, laparoscopic adhesiotherapy, laparoscopic adhesiolysis, children zis

Adhesive disease (AD), the pathogenetic basis of which is intra-abdominal adhesions, in the clinical aspect is a combination of recurrent pain syndrome with a violation of the evacuation function of the gastrointestinal tract. The main complaints are abdominal pain, vomiting, and in advanced cases, stool retention and lack of passage of gas. The history contains indications of previous surgical interventions in the abdominal cavity.

The adhesive process of the peritoneum is a protective reaction of the body aimed at delimiting the pathological process in the abdominal cavity and thereby allowing one to cope with severe infectious or traumatic lesions of the abdominal organs. At the same time, the adhesive process in the abdominal cavity is one of the main causes of SB and, as a complication of the latter, adhesive intestinal obstruction (IOB). The low effectiveness of traditional methods of treating SB, frequent relapses and high mortality after repeated surgical interventions, amounting to 1.4–12%, force us to look for new approaches to solving this problem . SB is characterized by a complex symptom complex, in which pain dominates . The intensity and frequency of painful attacks are variable; in severe cases, even a slight violation of the

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diet or simply physical activity provokes severe pain, nausea, and vomiting. Against this background, asthenovegetative disorders develop; in patients with pronounced manifestations of SB, the quality of life is significantly reduced, and their social adaptation is impaired.

The most dangerous manifestation of SB - adhesive intestinal obstruction - in most cases requires repeated surgical intervention, which inevitably provokes the formation of new adhesions in even greater numbers. According to literature data, in pediatric practice the proportion of this type of obstruction among other types is 30–40%. Up to 60% of all relaparotomies in children are performed for acute SCI. In 7–10% of cases, the adhesive process becomes progressive, causing the clinical picture of recurrent SB.

One of the main ways to improve the results of treatment of SB is early diagnosis. However, the information content of traditional radiological methods (plain radiography, abdominal fluoroscopy) is only 50–60%. In recent years, the ultrasound method has become increasingly widespread for diagnosing SB. The absence of radiation exposure, painlessness, relative speed of examination and non-invasiveness of the method allow it to be used repeatedly, including for dynamic echographic control. An alternative to traditional open surgery is currently a minimally invasive intervention - laparoscopy followed by adhesiolysis. Laparoscopic access, with its minimal tissue trauma, creates fewer conditions for the development of adhesions in the abdominal cavity and associated complications. The risk of puncture complications (injury to large vessels and hollow organs) is successfully overcome by using a gentle, safe and effective technique of direct puncture of the abdominal cavity with a blunt-pointed trocar. Laparoscopy allows you to clarify the localization and extent of the adhesive process, the condition of the intestinal loops involved in the adhesive conglomerate.

The impact on the adhesive process in the abdominal cavity is achieved by carrying out specific drug treatment developed in the clinic taking into account the modern view of the pathogenesis of postoperative adhesions. Ultrasound diagnostics, drug anti-adhesion therapy and reduction of surgical trauma through minimally invasive intervention - these interrelated problems are solved by the proposed algorithm for the diagnosis and treatment of SB in children. Taking into account the clinical picture (localization of pain, presence of postoperative scars) in the intended area of the abdominal cavity, a polypositional scan is performed (a series of longitudinal and transverse scans of the abdominal cavity) in  $\beta$ -mode, displaying a longitudinal section of the intestinal tube and identifying viscerovisceral and visceroparietal adhesions. It is recommended to conduct research in children of an older age group against the background of breath holding. To describe the adhesive process of the abdominal cavity, two signs were used: the presence of a conglomerate of intestinal loops and the symptom of a fixed intestinal loop (FCL), which indicates the fixation of intestinal loops to the parietal or visceral peritoneum.

Laparoscopy. A prerequisite was the use of video laparoscopy. The insertion site of the first trocar was determined according to ultrasound data, taking into account the localization of postoperative scars on the anterior abdominal wall (contralateral). After inserting a trocar with an endoscope and injecting CO<sub>2</sub> to 14 mm Hg. Art. (carboxyperitoneum) examined the accessible parts of the abdominal cavity. Laparoscopic adhesiolysis was carried out using a standard endovideolaparoscopic complex. The set of necessary tools is represented by atraumatic clamps-graspers, scissors and a bipolar or ultrasonic coagulator. During laparoscopy, adhesions must be coagulated with an electrocoagulator before dissection to avoid subsequent bleeding. The dissection of the adhesions was carried out using laparoscopic scissors, while most of the adhesions in patients who received preoperative preparation were divided bluntly, absolutely bloodlessly. Over the past 2 years, we have successfully used the Harmonic ultrasonic scalpel, which has a number of advantages over traditional coagulators: a minimal



zone of necrosis of the dissected surface and a reduced risk of perforation of a hollow organ, a small amount of smoke generated during the coagulation process, and most importantly, the ability to use working surfaces (jaws) device as a manipulator, which made it possible to reduce the number of laparoports applied. Patients with positive dynamics of pain syndrome and the presence or absence of echographic signs of adhesions were prescribed a second course of anti-adhesive therapy after 1 month. Depending on the clinical manifestations, repeated treatment courses were carried out. If there was a significant lack of clinical effect at the end of the course of anti-adhesion therapy, patients were given indications for laparoscopic adhesiolysis. After the intervention, anti-relapse treatment courses were carried out for 7 days. Patients who underwent adhesiolysis were prescribed 2-3 courses of anti-adhesion therapy for 10 days at an interval of 3 months, followed by echographic monitoring. Subsequently, these children were followed up on an outpatient basis with mandatory examination and ultrasound every 3 months during the first year and once every 6 months for 3–5 years. The number of conservative courses was determined individually; it depended on the volume of surgical intervention, the severity of the clinical effect and the dynamics of echographic signs.

Severe adhesions and a high risk of damage to internal organs during laparoscopic manipulations were indications for conversion and open laparotomy using video-assisted methods. At the same time, visual examination of the abdominal cavity made it possible to avoid unjustifiably extended laparotomies, aggravating the traumatic nature of the intervention.

A study of long-term results in 158 children with BS who underwent 1-2 courses of anti-adhesion therapy showed that 33 (20.1%) patients required re-hospitalization due to persistence or resumption of pain, 12 (7.6%) of them were admitted with symptoms of SCI and were operated on according to emergency indications. In 19 children with total adhesions of the abdominal cavity, it was possible to stabilize the general condition, relieve the pain syndrome and normalize nutrition, but the continuing threat of developing intestinal obstruction necessitated constant follow-up.

The effectiveness of treatment of patients with SB in combination with surgical interventions was 92.4%. Indications for planned surgical treatment of patients with SB are the unsatisfactory clinical effect of conservative therapy and the presence of echographic signs of fixation of intestinal loops to the parietal or visceral peritoneum. In patients with a pronounced positive clinical effect, the disappearance of echographic signs of fixation of the adhesive conglomerate to the parietal or visceral peritoneum, several courses of conservative therapy must be carried out until the pain syndrome is relieved.

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