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LAPAROSCOPIC INTERVENTIONS IN THE SURGICAL TREATMENT OF ACUTE INTESTINAL OBSTRUCTION

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Annotation: In this article a retrospective analysis of surgical treatment of 37 patients in with intestinal obstruction was conducted. Based on our experience, we have established the following contraindications for laparoscopic adhesiolysis : massive adhesive process in the abdominal cavity; planar adhesions of the intestinal wall with the parietal peritoneum over a large extent; signs of cicatricial degeneration of the intestine; a sharp increase in the diameter of the entire small intestine (the diameter of the small intestine is more than 5 cm); necrosis of the loop of the small intestine; doubt about the viability of the intestine; nodulation , invagination.

Key words: Laparoscopical treatment, intestinal obstruction, interventions.

Introduction.

In recent decades, there has been a steady increase in the number of patients with acute adhesive intestinal obstruction (AIO) undergoing surgical treatment. According to modern literature, at present adhesive intestinal obstruction accounts for about 50-60% of forms of obstruction. Mortality in ASCI reaches 13-55% and does not tend to decrease. The unsatisfactory results of treatment of patients in this group forced surgeons to continue the search for methods of treatment using new technologies and developments. Many authors note that the results of the treatment of ASIO are significantly improved due to the use of laparoscopic techniques, the effectiveness of which reaches 50-80%. The widespread introduction of endoscopic surgical technologies into clinical practice has largely changed the conditions and possibilities for the surgical treatment of ASIO [3.4]. From a theoretical standpoint, laparoscopic elimination of ASIO is the optimal method, since by itself it does not induce adhesions in the abdominal cavity and, therefore, the risk of obstruction recurrence is significantly reduced. At the same time, laparoscopic interventions require the definition of clear indications and contraindications in order to achieve good treatment results.

The aim of the study was to develop indications and contraindications, to establish the efficiency of laparoscopic operations in patients with ASIO.

Materials and research methods .

The present study is based on the analysis of the results of treatment of 37 patients with ASIO aged 18 to 45 years who were treated in the 1-Emergency Abdominal Surgical Department of the Fergana branch of the Fergana branch of RSCEMC in the period from 2018 to 2021. Men - 16, women - 21. Among the examined patients with ASIO, all had a history of one surgical intervention, 4 patients had two. The cause of ASIO in the studied patients was previously transferred surgical intervention : Appendectomy - 13 (35.1%); Operations on the pelvic organs-11(29.7%); Cholecystectomy-5(13.5%); Sewing perforated ulcer - 7 (18.9%); Laparotomy , splenectomy-1(2.7%); As can be seen from the causes of ASIO, the majority of patients with ASIO have previously undergone appendectomy and surgery on the pelvic organs.

The diagnosis of ASCI was based on the data of clinical and laboratory examination, X-ray and ultrasound examinations of the abdominal organs. Ultrasound was the most objective research method for determining treatment tactics [1,2]. Sonographic signs were: an increase in the diameter and thickness of the intestinal wall, a visible relief of the mucous membrane, pendulum peristalsis, the presence of anechoic contents in the intestinal lumen, and fluid in the abdominal cavity .

All patients were operated on under general anesthesia with artificial lung ventilation after appropriate preoperative preparation, the main task of which was to normalize the volume of circulating blood and stabilize other hemodynamic parameters. The puncture of the abdominal cavity was performed in the usual way using a Veress needle or in an open way according to Hassen in 3 patients. During the survey videolaparposcopy, we assessed the localization and degree of the adhesive process: - revealed the degree of microcirculation disorders in the serous membrane of the intestine; - assessed changes in the parietal and visceral peritoneum; - afferent and efferent bowel loops and obstruction sites were identified ; - determined the amount and nature of the exudate [5,7].

Results of the study and their discussion.

In the course of the study, indications for videolaparoscopic intervention were developed: the absence of extensive laparotomic scars on the anterior abdominal wall; the absence of previously transferred large volume and repeated operations on the abdominal organs; no history of intestinal fistulas; pregnancy of small terms; moderate flatulence (diameter of the small intestine is not more than 5 cm, according to ultrasound).

Based on our experience, we have established the following contraindications for laparoscopic adhesiolysis : massive adhesive process in the abdominal cavity; planar adhesions of the intestinal wall with the parietal peritoneum over a large extent; signs of cicatricial degeneration of the intestine; a sharp increase in the diameter of the entire small intestine (the diameter of the small intestine is more than 5 cm); necrosis of the loop of the small intestine; doubt about the viability of the intestine; nodulation , invagination. As our studies have shown, from a technical point of view, situations were especially favorable when the cause of a mechanical obstacle is a single extrusion or a fixed strand of the greater omentum, as well as single deformities of the small intestine in the form of a "double-barreled".

Among the observed patients, 6 patients had planar, cord-like adhesions containing only capillaries, in this regard, the adhesions were dissected with scissors without the use of electrocoagulation [6]. It was optimal to conduct the dissection of adhesions simultaneously with the help of two or three instruments. At the same time, two manipulators were used to tension the separated adhesions and retract the regular organs in order to prevent their accidental damage. With good vascularization of adhesions, electrocoagulation was performed before their intersection (bipolar coagulation was preferred). As our experience shows, adhesions should be coagulated no closer than 2-3 mm from the intestinal wall, and with monopolar coagulation no closer than 1 cm, since thermal damage from the visible coagulation zone can spread to this distance. Visceroparietal adhesions were eliminated by separating the intestine from the abdominal wall along with a portion of the parietal peritoneum. In all our observations, the greater omentum was involved in the adhesive process, which was separated from the parietal peritoneum by a blunt way, or coagulated directly at the parietal peritoneum with a bipolar clamp. Adhesions of the greater omentum with the intestines were separated in a sharp way. The tissue of the omentum was coagulated until a black scab was formed, departing no more than 1 cm

from the intestinal wall, after which the tissue was crossed through the zone of coagulation necrosis along the edge facing the intestine.

After elimination of the cause of obstruction, the collapsed section of the intestine was filled with intestinal contents, which was a sign of the adequacy of the use of surgical technique. An important step in the operation after the elimination of strangulation obstruction is the assessment of the viability of the intestine, especially in the region of the strangulation furrow. With questionable viability, the final treatment strategy in three patients was determined by dynamic laparoscopy (using a lapaport), which was performed approximately 8-12 hours later (however, the time for re-examination was determined by clinical manifestations).

During endoscopic operations, complications in the form of subcutaneous emphysema and bleeding from the vessels of subcutaneous fatty tissue occurred in 3 cases at the early stages of mastering the technique [6]. These complications did not require special treatment. In order to prevent adhesion formation in all patients, endoscopic operations were completed with sanitation of the abdominal cavity. For sanitation, warm saline solution was used, and a solution of dekasan in the volume necessary for the sanitation of the abdominal cavity. The liquid was then removed. In the postoperative period, up to 100 ml of decasan solution was injected into the abdominal cavity through drains for 3 days . It is known that with a decrease in the pH of the medium, thrombin activity decreases sharply and, therefore, fibrinogen does not turn into fibrin, as the initial link in adhesion formation .

There were no deaths among the observed patients. The average length of stay in the hospital was 5 days.

Conclusions.

Thus, the use of videolaparoscopy in the complex treatment of patients with ASCI is a promising direction. Laparoscopic surgery has clear advantages over traditional surgery, is a low-traumatic intervention, reduces the likelihood of adhesion recurrence, but requires further in-depth study and retrospective analysis.

Videolaparoscopy makes it possible to accurately establish the diagnosis of intestinal obstruction, determine the site of obstruction and the mechanism of obstruction, perform adequate viscerolysis with separation of adhesions that cause obstruction, as well as those that can cause its recurrence.

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