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TREATMENT OF ACUTE ADHESIVE INTESTINAL OBSTRUCTION WITH MINI-INVASIVE METHODS

Abstract. The authors studied the results of treatment of patients with adhesive disease of the abdominal cavity, determined the frequency of relapses of adhesive intestinal obstruction and studied the possibility of laparoscopic adhesiolysis in the surgical treatment of acute adhesive intestinal obstruction. A total of 987 patients with AIN were operated on: of which laparotomy adhesiolysis - 539, intestinal resection laparotomy with interintestinal anastomosis-246, intestinal resection laparotomy with excretion of intestinal fistula-88, laparoscopy adhesiolysis-114. The use of laparoscopic adhesiolysis promotes to the early restoration of intestinal motility within 24-48 hours, reduces the frequency of relapses of adhesive disease, and reduces the length of hospitalization on average to 6.8 days.

Keywords: adhesive intestinal obstruction, laparoscopic adhesiolysis.

INTRODUCTION
Since the time when surgical interventions on the abdominal organs were introduced into wide surgical practice, the problem of peritoneal adhesive disease
has not lost its relevance to the present day [1,2]. Confirming the international status of the problem, the International Adhesions Society (IAS) was formed in Dallas, Texas, USA in 1996. Surgery for abdominal adhesive disease does not exclude the possibility of relapse, and sometimes is a stimulating factor in adhesion formation [9]. Adhesiolysis during laparotomy is not a guarantee of their absence in the future. According to some data, relapses occur in up to 50% of cases, repeated operations increase the risk of adhesions formation and their complications [4,5,9,14,16]. Possibility of laparoscopic resolution of obstruction by dissection of adhesions (adhesioenterolysis) in patients with late acute adhesive intestinal obstruction is widely discussed in print, data on the possibilities of using this method in patients with early acute intestinal obstruction [3,6,7,8,12,13,14].

According to a number of authors, the proportion of laparoscopic operations varies from 11.4 [17] to 97.0% [15]. There are a number of works that describe the clear advantages of laparoscopic operations for acute intestinal obstruction compared with open operations [7,8]. Moreover, the number of complications after performed laparoscopic operations is 25% less than after open operations [10]. Such a difference in the frequency of laparoscopy may indicate significant differences in the choice of indications for the use of laparoscopic surgery in acute intestinal failure or the use of insufficiently clear recommendations.

Purpose of the study is to research the possibilities of laparoscopic adhesiolysis in the surgical treatment of acute adhesive intestinal obstruction.

MATERIALS AND METHODS

To compare the effectiveness of laparoscopic adhesiolysis, we analyzed the results of treatment of 1988 patients with acute intestinal obstruction in the Samarkand branch of the Samarkand branch of the Nationwide Scientific Center on Emergency Care in the period from 2010 to 2020. The patients were 18 to 75 years old (mean 56.6 ± 3.7). Among sick men there were 1342 (67.5%), and women - 646 (32.5%). Of the total number of patients, 1286 (64.7%) were diagnosed with small bowel obstruction, 702 (35.3%) patients were diagnosed with colonic obstruction. Surgical treatment was used in 987 patients (49.6%), of which 706 (71.5%) patients had small intestinal obstruction and 281 (28.5%) patients had colonic obstruction.
Table 1

<table>
<thead>
<tr>
<th>Causes</th>
<th>Number of patients</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>abs</td>
</tr>
<tr>
<td>Previously not operated</td>
<td>126</td>
</tr>
<tr>
<td>Appendectomy</td>
<td>605</td>
</tr>
<tr>
<td>Operated for acute intestinal failure</td>
<td>579</td>
</tr>
<tr>
<td>Operated for abdominal trauma</td>
<td>296</td>
</tr>
<tr>
<td>Gynecological operations</td>
<td>212</td>
</tr>
<tr>
<td>Cholecystectomy</td>
<td>117</td>
</tr>
<tr>
<td>Stomach resection</td>
<td>53</td>
</tr>
<tr>
<td>Total</td>
<td>1988</td>
</tr>
</tbody>
</table>

The frequency of development of adhesive intestinal obstruction, depending on the frequency of operations carried out among the observed patients, is shown in Fig. one.

The analysis of clinical observations of patients with acute intestinal failure was carried out on the basis of the study of the anamnesis, patient complaints, data of objective and instrumental examination. Upon admission to the hospital, all patients underwent clinical and biochemical blood tests, X-ray examinations, ECG,
ultrasound of the abdominal organs and diagnostic laparoscopy, and, if necessary, multispiral computed tomography.

The nature of surgical interventions: laparotomy adhesiolysis - 539, laparotomy, resection of the intestine with the imposition of an interintestinal anastomosis - 246, laparotomy, resection of the intestine with the removal of intestinal fistula-88, laparoscopy of adhesiolysis-114, which accounted for 11.5% of (987) operations for acute adhesions obstruction for 2010-2019.

Access is carried out after the imposition of carboxyperitoneum through the Veress needle, inserted at a distance of 5-7 cm from the postoperative scar along the midclavicular line below the costal arch by 4 cm to avoid intestinal damage. Then, at the same point, the viewing trocar is introduced in places convenient for manipulation. Inspection of the intestine begins with collapsed loops, which reduces the possibility of damage to its wall. In the majority of patients, the cause of the obstruction was single cord-like adhesions. Dissection of adhesions is carried out with good visualization at a distance of at least 1 cm from the intestinal wall. We cut short (less than 2 cm) cord-like isolated adhesions (plugs) containing vessels with scissors between the superimposed clips, without using coagulation in order to avoid thermal damage to the nearby organ. The planar adhesions, limited in area, are anatomically accurately separated with scissors with their complete visualization and careful traction of the intestine, at least 0.5 cm away from its wall, without the use of electrocoagulation. If there are extensive (III-IV degrees) coarse adhesions in the abdominal cavity, occupying more than 1-2 anatomical regions, or if conglomerates of welded intestinal loops are found, as well as in case of hard-to-reach adhesions due to the presence of significantly swollen intestinal loops, we proceed to laparotomy.

RESULTS AND DISCUSSION

During the operation, we encountered various types of adhesions and divided them into the following groups: single coarse cord-like adhesions were detected in 399 patients, multiple flat visceroparietal adhesions in 549, mixed armored abdomen in 39 patients. The conversion rate is 18% (20 patients). The main reasons for the conversion were technical difficulties in the separation of adhesions and
conglomerates of welded loops of the small intestine, intestinal necrosis or traumatic injury to the intestinal wall. Patients, if necessary, had an epidural block installed, which made it possible to restore the motility of the intestinal tract within the next 2 days.

Patients after laparoscopic adhesiolysis became more active for 1-2 days. The recurrence rate after laparotomy with adhesiolysis was observed in 129 (23.9%) patients, after laparoscopy with adhesiolysis in 3 (2.6%). There were no lethal outcomes after laparoscopic adhesiolysis. In 1 patient, bleeding from a crossed adhesion occurred, which was stopped by repeated laparoscopy. The early postoperative period in patients after laparotomy averaged 11.7 days, after laparoscopic operations from 3 to 12 days.

**CONCLUSION**

1. For laparoscopic adhesiolysis, patients with a picture of mechanical intestinal obstruction without signs of peritonitis, severe flatulence and severe endotoxicosis should be selected, without repeated abdominal operations.

2. The advantages of this type of intervention are low trauma, early recovery of intestinal motility, early activation of patients with a decrease in the risk of developing adhesions of the abdominal cavity, reduced hospitalization.

**References:**


