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# **SOME ASPECTS OF THE COURSE OF HERNIOPLASTY IN PATIENTS WHO UNDERWENT SURGERY FOR INCARCERATED INGUINAL HERNIAS**

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Progressive achievements of modern herniosurgery create significant positive preconditions for the pragmatic introduction of laparoscopic technologies in emergency surgery in patients with incarcerated inguinal hernias [1,2]. However, the diversity of incarcerated hernias is characterized by considerable differences in the reparative process, often in contamination, which requires the development of new methods of operations, new synthetic antibacterial implants, pathogenetically sound principles of modern correction of regional systemic components of the treatment process [3,4].

**The aim of the study** was to analyze and compare the features of changes in sonographic signs of uncomplicated hernioplasty in patients with incarcerated inguinal hernias depending on the type of surgery.

**Materials and methods of research.** The results of surgical treatment of 82 patients with incarcerated inguinal hernias ( Nyhus III A and III B ) without small bowel obstruction, were analyzed. Patients of the first (38 patients) group underwent Liechtenstein hernioplasty, and patients of the second (44 patients) group underwent TAPP. Sonographic monitoring of the course of the regional reparative process was performed on (a linear sensor of 7.5 MHz) 3, 8, 12 days postoperatively. The clinical-diagnostic algorithm included laboratory, instrumental research methods and statistical research methods.

**Results of the research.** Studies of the peculiarities of hernioplasty in patients of the first group found that on the 3rd day the implant had a linear shape in  $91.8 + 4.16\%$  of patients, on the 7th day in  $84.17 + 5.35\%$ , on the 14th day in  $94.28 + 6.42\%$  with a thickening of the area on the 3rd day -  $3.28 + 0.26$  mm, on the 7th day  $2.96 \pm 0.22$  mm, on the 14th day  $2.27 + 0.31$  mm. While in patients of the second group the linear form of the implant on the 3rd day took place in  $97.22 + 5.92\%$ , on the 7th day in  $96.21 + 4.71\%$  on the 14th day in all patients, with thickening of the area on the 3rd day  $2,06 + 0.12$  mm, on the 7th day  $1.32 + 0.09$  mm and on the 14th day  $0.32 + 0.09$  mm.

It was also found that the accumulation of fluid in the area of the implant was visualized in patients of the first group on day 3 in  $76.53 \pm 3.15\%$  of patients, on day 7 in  $63.52 + 3.12\%$ , on day 14 in  $24,35 + 1.16\%$  with thickening of the area for 3 days -  $4.16 + 1.24$  mm, for 7 days  $3.73 + 1.89$  mm, for 14 days  $2.39 + 0.19$  mm. Whereas in patients of the second group more positive dynamics was observed. Thus, on the 3rd day of fluid accumulation in the implant area was visualized in  $51.32 + 2.41\%$  of patients, on the 7th day in  $39.67 + 1.17\%$ , on the 14th day in  $10.7 + 0.11\%$  with thickening plots only for 3 days up to  $2.73 + 1.11$  mm and for 7 days up to  $1.46 + 0.12$  mm.

In addition, in all patients of both groups, subcutaneous tissue heterogeneity was observed during the first week, which occurred on days 3 and 7 in all patients of the first group and only in  $42.76 + 3.54\%$  on day 3 and in  $19.98 + 1,12\%$  of patients on the 7th day of the second group, and after 14 days this feature was observed only in  $41.34 + 3.26\%$  of patients in the first group.

It was also found more frequent accumulation of fluid in the subcutaneous tissue in the first group, which occurred on the 3rd day in  $39.76 + 2.62\%$  of patients on the 7th day in  $44.49 + 3.11\%$  and on the 14th day in  $26.31 + 2.36\%$ , and in patients of the second group the accumulation of fluid in the subcutaneous tissue was observed only in  $22.07 + 13.26\%$  on day 3 and in  $16.38 + 1.12\%$  of patients on day 7.

### **Conclusion.**

1. The course of the reparative process in the postoperative period in patients who underwent surgery for incarcerated inguinal hernias, when using TAPP in contrast to patients who underwent Liechtenstein hernioplasty, is accompanied by a significant reduction in the frequency and severity of the exudative component.

2. The results of sonographic control over the area of hernioplasty in patients with uncomplicated postoperative period allow to clearly monitor the reparative process for timely detection of wound complications or prevention.

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