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FEATURES OF STRUCTURAL-CONTAMINATION PROCESSES IN EXTENDED INDICATIONS FOR URGENT HERNIOPLASTY

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The positive achievements of the widespread introduction of hernioplasty in planned herniosurgery are increasingly encouraging the expansion of indications for its reasonable introduction in patients with strangulated ventral hernias [1,2,3]. However, an in-depth analysis of various postoperative complications encourages further investigation of the features of contamination processes of peri-hernial areas [4, 5].

The aim of the study is to investigate the features of individual contamination processes depending on the method of modeling a strangulated ventral hernia.

Materials and methods of research. The work is based on the results of experimental studies (white rats), which were performed in strict compliance with general ethical standards and principles of animal experiments. To investigate the contamination processes of the area of strangulated hernia in experimental animals of 1 group (18), simulation of small bowel loop strangulation was performed in which the hernia sac was represented only by a separated peritoneum. In animals 2 group (18) after previous (3 months) modeling of abdominal wall hernia also performed strangulation of the small bowel loop. Investigation of microbial contamination of the peri-hernial area (hernia water, hernia sac, around the hernia tissue, parietal peritoneum

of the hernia gate) were performed after 3, 6, 9 hours. Laboratory, instrumental, microbiological and statistical research methods were used.

Results of the research. The results of the study of microbial contamination in the first group revealed that 3 hours after the simulation of the pathological process there is an infection of hernia water to 2.64 ± 0.13 lg CFU / ml, parietal peritoneum of the hernia sac - 2.38 ± 0.17 lg CFU / g, peri-hernia tissues - 2.23 ± 0.19 lg CFU / g, while in the second group the contamination was lower and was only for the hernia sac 2.17 ± 0.14 lg CFU / g

After 6 hours in the first group microbial contamination of hernia water was up to 2.96 ± 0.23 lg CFU / ml, parietal peritoneum of the hernia sac - 2.67 ± 0.25 lg CFU / g, peri-hernia tissue - 2.44 ± 0.19 lg CFU / g, parietal peritoneum of the hernia gate - 1.86 ± 0.22 lg CFU / g. In the second group after 6 hours there was a significant reduction in the dislocation processes of microbial contamination, because even with microbial contamination of hernia water 3.09 ± 0.16 lg CFU / ml and hernia sac - 2.84 ± 0.19 lg CFU / g contamination of peri-hernia tissues was only - 2.12 ± 0.14 lg CFU / g and was not observed in the parietal peritoneum of the hernia gate.

In the first group after 9 hours microbial contamination of hernia water was 3.45 ± 0.31 lg CFU / ml, parietal peritoneum of the hernia sac - 3.23 ± 0.24 lg CFU / g, peri-hernia tissue - 3.31 ± 0.27 lg CFU / g, parietal peritoneum of the hernia gate - 2.39 ± 0.15 lg CFU / g. After 9 hours, the second group showed a significant reduction in microbial dislocation. And although the microbial contamination of hernia water was 3.49 ± 0.26 lg CFU / ml and hernia sac - 3.14 ± 0.22 lg CFU / g contamination of the surrounding hernia tissues was only - 2.51 ± 0.27 lg CFU / g, and parietal peritoneum of the hernia gate even 1.62 ± 0.12 lg CFU / g

Conclusion. 1. The severity of contamination processes in strangulated ventral hernia is directly related to the duration of histo-morphological transformation of the hernia sac.

2. Two-stage modeling of a strangulated ventral hernia allows to expand the indications for the use of urgent hernioplasty and justifies the choice of mesh placement.

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