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MORPHO-FUNCTIONAL PRECONDITIONS OF DISLOCATION PROCESSES IN PATIENTS WITH STRANGULATED INGUINAL HERNIA

B. I. Slonetskyi

Doctor of Sci(Med), Professor
Department of surgery of dentistry faculty
BOGOMOLET'S NATIONAL MEDICAL UNIVERSITY
Kiev, Ukraine

V.O. Kotsiubenko

Surgeon
Surgical department №1
Kiev City Emergency Hospital
Kiev, Ukraine

Hernioplasty in modern conditions is a priority and generally recognized and despite this is constantly and dynamically improving [1,2]. At the present stage of emergency surgery - incarcerated inguinal hernia continue to be the subject of discussion on the use of patients with hernioplasty depending on the strangulated organ and the duration of strangulation, which encourages in-depth study of the pathogenesis of the disease [3,4].

The aim of the study was to investigate the protective properties of the hernia sac depending on the duration of hernia-carrier in patients with strangulated (small bowel) inguinal hernia.

Materials and methods of research. The work is based on the results of clinical studies of the protective properties of the hernia sac in patients with strangulated (small bowel) inguinal hernia Nyhus type III A and III B. In patients of the first (38 patients) group the duration of hernia-carrier was up to 1 year, and in patients of the second (43 patients) group the duration of hernia-carrier exceeded 3 years. Studies of microbial contamination of the peri-hernial area (hernia water, hernia sac, around the hernia tissue, parietal peritoneum of the hernia gate) were performed for 3, 6, 9 hours from the moment of hernia compression. Laboratory, instrumental, microbiological and statistical research methods were used.

Results of the research. Studies of microbial contamination in the first group of the peri-hernial area revealed that 3 hours after the small bowel strangulation, infection of the hernia water to $3.04 + 0.19 \lg \text{CFU} / \text{ml}$, hernia sac - $2.57 + 0.21 \lg \text{CFU} / \text{g}$, peri-hernia tissues - $2.29 + 0.14 \lg \text{CFU} / \text{g}$, while in patients of the second group microbial contamination of hernia water was $3.12 + 0.17 \lg \text{CFU} / \text{ml}$, hernia sac - $2.74 \pm 0.22 \lg \text{CFU} / \text{g}$ and found no lesions of the peri-hernia tissues. In patients of the first group after 6 hours from the moment of small bowel strangulation microbial

contamination of hernia water was $3.69 + 0.24$ lg CFU / ml, hernia sac - $3.03 + 0, 22$ lg CFU / g, peri-hernia tissues - $2.87 + 0.16$ lg CFU / g. In the second group it was found that despite the increase in microbial contamination of hernia water to $3.78 + 0.32$ lg CFU / ml, hernia sac - $3.26 + 0.29$ lg CFU / g, contamination of the surrounding hernia tissues was significantly lower and was only $2.31 + 0.18$ lg CFU / g. In addition, in both groups of patients 6 hours after strangulation, no infection of the parietal peritoneum of the hernia gate was observed.

After 9 hours from the moment of strangulation in the first group, the microbial contamination of hernia water was $4.16 + 0.28$ lg CFU / ml, hernia sac - $3.39 + 0.24$ lg CFU / g, peri-hernia tissue - $3.52 + 0.17$ lg CFU / g, parietal peritoneum of the hernia gate - $2.18 + 0.12$ lg CFU / g. Patients of the second group showed significant protective properties of the hernia sac, because in contrast to patients of the first group, despite the growth of microbial contamination of hernia water to $4.27 + 0.36$ lg CFU / ml and hernia sac to $3.58 + 0.29$ lg CFU / g, microbial contamination of peri-hernia tissues was only $2.82 + 0.23$ lg CFU / g and no infection of the parietal peritoneum of the hernia gate was detected.

Conclusion. 1. Comparative analysis of dislocation processes of microbial contamination of the peri-hernial area in patients with strangulated inguinal hernia (Nyhus III A and III B type) revealed the protective properties of the hernia sac depending on the duration of hernia-carrier.

2. The results of the assessment of the dynamics of microbial contamination of the peri-hernial area in patients with strangulated inguinal hernia (Nyhus III A and III B type) indicate the possibility of expanding the indications for urgent hernioplasty, but taking into account the placement of mesh.

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