All this indicates the need to develop an effective, non-invasive device to prevent postoperative eventration, the use of which does not require additional surgical techniques during surgery.

Therefore, the work aimed to develop and clinically substantiate a device for the prevention of postoperative eventration, by studying the frequency of postoperative complications in patients with malignant neoplasms of the abdominal cavity.

To prevent postoperative eventration, we have suggested a non-invasive device, the use of which does not require additional surgical techniques during surgery, and also allows you to use it in case of incomplete (subcutaneous) eventration.

The device consists of 5 plastic plates, 42 cm long, lined with soft fabric and movably connected by the widest parts. The central plate is adjustable depending on the width of the posterior surface of the patient's torso. The two side plates on the free edge have 11 loops for lacing.

To substantiate the effectiveness of this device, we examined 107 patients with malignant neoplasms of the abdominal cavity, with a high risk of postoperative eventration.

To achieve this goal, patients were divided into two groups - comparison and main. The comparison group consisted of individuals whom the suggested device was not used to. The main group consisted of patients who in the early postoperative period used a device to prevent postoperative eventration

All patients received standard postoperative treatment according to the protocols of medical care for patients with urgent surgical pathology of the abdominal organs.

The obtained results of the study indicate a probable predominance of the frequency of postoperative eventration in patients of the comparison group. It should be noted that there is no significant difference in the frequency of "systemic" and other "local" postoperative complications between the two study groups of patients, which indicates the representativeness of the sample, as "local" postoperative complications lead to the development of eventration.

The average length of hospital stay in patients of the comparison group was 22.7 ± 0.94 days, which is 1.16 times ($p > 0.05$) longer than in the main group (19.6 ± 0.95 days).

Postoperative mortality in patients of the comparison group occurred in 8 (13.3%) persons, which is 6.9% ($p > 0.05$) higher than in the main group - 3 (6.4%) persons.

The use of the suggested device to prevent postoperative eventration allows a non-invasive way to prevent the development of postoperative eventration, as well as in the event of incomplete eventration to prevent the development of complete one.

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EFFECT OF INTRA-ABDOMINAL HYPERTENSION ON THE STRENGTH OF THE POSTOPERATIVE SCAR OF LAPAROTOMY WOUND

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One of the main factors of postoperative eventration is intra-abdominal hypertension, which occurs in various surgical pathologies of the abdominal cavity.

Despite the presence of a large number of scientific papers on the negative effect of intra-abdominal hypertension (IAH) on the morphological state of granulation tissue in the area of the laparotomy wound, there are no publications on the effect on the strength of the postoperative scar.

Therefore, the aim of the study was to investigate in an experiment on small laboratory animals the effect of IAH on the mechanical strength of the postoperative scar of a laparotomy wound.

The experiment was performed on 102 laboratory rats, which underwent a median laparotomy and the edges of the muscular-aponeurotic layer of the anterior abdominal wall were brought together with simple nodal sutures.

The main group consisted of 72 animals, which were created IAH by inserting into the abdominal cavity a container (condom) with a certain amount of furacillin. Depending on the level of intra-abdominal pressure (IAP), the animals of the main group were divided into two subgroups.

The IAP level of the animal of the first subgroup was 20 smH2O (14.7 mmHg), and the second - 40 smH2O (29.4 mmHg).

The comparison group consisted of 48 animals who had an empty condom inserted into the abdominal cavity after laparotomy.

The mechanical strength of the postoperative scar of the laparotomy wound was determined by the method introduced by GV Petrovich (2010) on the 1st, 3rd, and 5th days after the creation of IAH, by measuring the level of IAH at the time of rupture of the postoperative scar of the laparotomy wound.

The results of the study indicate that the created IAH negatively affects the strength of the postoperative scar. Thus, a steady increase in IAP to 20 smH2O leads to a decrease in the mechanical strength of the postoperative scar, but the latter on the 7th day of observation returns to normal because the difference with the comparison group at this time is unlikely. It should be noted that the strength of the postoperative scar depends on the level of IAP, as the growth of the latter to 40 smH2O leads to significantly lower values against other experimental groups, except for the first subgroup of the main group on the 1st day of observation, where this difference is unlikely. It should be added that the dynamics of growth of mechanical strength of the postoperative scar, throughout the study period, is unlikely at increased IAP to 40 smH2O.

Therefore, the created IAH leads to a decrease in the mechanical strength of the postoperative scar of the laparotomy wound. The degree of a negative impact of IAH on the strength of the postoperative scar is inversely proportional to the level of IAH.

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THE ROLE OF INTRA-ABDOMINAL HYPERTENSION IN DEVELOPMENT POSTOPERATIVE EVENTRATION IN CANCER PATIENTS

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Despite the development of modern surgery, postoperative eventration continues to be one of the most dangerous complications, especially in patients with malignant neoplasms of the abdominal cavity, where there are phenomena of secondary immunodeficiency, cachexia, anemia, etc.

One of the many factors that directly lead to postoperative eventration is an acute increase in intra-abdominal pressure (IAP), which is quite common in cancer patients in the early postoperative period.

One of the most accurate predictors of visceral perfusion is the level of abdominal perfusion pressure (APP). According to the literature, the level of APP below 60 mmHg is directly correlated with the survival of patients with intra-abdominal hypertension.

The study of the frequency of postoperative eventration, depending on the level of intra-abdominal and abdominal perfusion pressure in patients with oncological pathology of the abdominal cavity, will determine the role of the latter in the development of this postoperative complication.

Therefore, the research is aimed to study the frequency of postoperative eventration in patients with malignant neoplasms of the abdominal cavity, depending on the level of intra-abdominal and abdominal perfusion pressure.

We examined 122 operated patients with malignant neoplasms of the abdominal cavity, who underwent median laparotomy.

Depending on the average level of IAP, patients were divided into three groups. The first group consisted of 57 (46.7%) individuals with a mean IAP level below 12 mmHg. The second group consisted of 40 (32.8%) with an average level of IAP - 12 - 17 mmHg. The third group consisted of 25 (20.5%), in which the average level of IAP was more than 18 mmHg.

Depending on the average level of abdominal perfusion pressure (APP), the first group consisted of 48 (39.3%) individuals with an average APP level of more than 90 mmHg. The second group consisted of 43 (35.3%) with an average level of APP - 89 - 56 mmHg. The third group