injection, angiographic and statistical methods of investigation were used.

Results and Discussion. The valve of the coronary sinus was revealed in 70% of cases (21/30), in 30% (9/30) the flap was absent. Catheterized coronary sinus valves were found in 80% (17/21) or 57% (17/30) of all observations. Thus, in 87% (26/30) cases, catheterization is possible, and for 13% (4/30), an alternative route is needed for the left ventricular electrode. As an alternative, the left lower phrenic vein flowing into the inferior vena cava in 60% of cases (72/120) are considered. Free are catheterized with a diameter of 5 mm or more — in 36.6% of cases (44/72) and conditionally catheterized with a diameter of less than 5 mm — in 23.3% of cases (28/72). Venous sinus as the main way of implantation of the left ventricular electrode with cardiac resynchronization therapy can be suitable for catheterization in 87% of patients, and for 13% of patients an alternative way of its implementation is needed. The left inferior phrenic vein, which flows into the lower vena cava, freely or conditionally catheterized, can serve as such an alternative pathway.

TOPOGRAPHO-ANATOMICAL CHANGES IN ABDOMINAL CAVITY AND RETROPERITONEAL SPACE AFTER NEPHRECTOMY

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Key words: *nephrectomy, topography of the abdomen and retroperitoneum*

Aim. Purpose of research — obtaining new data on changes in the topography of the abdomen and retroperitoneum after nephrectomy.

Material and Methods. In 105 patients with kidney cancer, the topography of the abdomen (liver, ascending and descending colon, spleen, duodenum) and retroperitoneum (pancreas, aorta, inferior vena cava) were studied depending on the location of the tumors and their size. A group of 25 patients was studied as a control without the pathology of the kidneys. Computed tomography on the device «LightSpeed RT16» (General Electric, USA) and morphometry for the analysis of abdominal and retroperitoneal displacement after operation were used. The examinations were performed before and after 6–8 days, 3–4 months and 6–8 months after nephrectomy.

Results and Discussion. After right-sided nephrectomy, the surgical bed is replaced by the ascending colon (level L_I–L_V), the head of the pancreas (level Th_{XII}–L_{II}), the inferior vena cava (level Th_{XII}–L_I), the descending part of the duodenum (level Th_{XII}–L_I) moving backwards; ascending colon (up to Th_{XII} level) moving upwards; the right lobe of the liver (level Th_{XI}–L_I) moving medially. After left-sided nephrectomy, the remaining part of the retroperitoneum is filled with the descending colon (level Th_{XII}–L_{IV}) displacing posteriorly, the body and tail of the pancreas (level Th_{XII}–L_{II}) displacing posteriorly and medially, spleen (level Th_{XI}) displacing medially.

Conclusions. On the basis of morphometry data, a quantitative description of the displacement of organs and structures of the abdomen and retroperitoneum towards the postoperative bed to the place of the removed kidney with a malignant tumor is given.

A STUDY OF THE ANATOMY OF THE LEVATOR ANI MUSCLE IN VIVO THROUGH THE CREATION OF THREE-DIMENSIONAL IMAGES

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Key words: *perineum, segmentation, m. pubococygeus, m. iliococygeus m. cocygeus, m. levator ani*

Aim. The aim of the study was to study the basic forms of the muscle structure that lifts the anus in men and women of the first and second adult periods and the older age group according to CT and MRI data.

Material and Methods. in our work we used data from computer and magnetic resonance tomograms of 57 patients aged 20 to 70 years. In the «Autoplan» system using a precision technique in semi-automatic mode, three-dimensional models of the muscle that lifts the anus are created.

Results and Discussion. The results of the research: three-dimensional models of the muscle that lifts the anus are created and described: for young women and men of all ages, the keel-shaped and funnel-like shape of the muscle that raises the anus is characteristic; and for women of advanced age — horseshoe.

Conclusions. The creation of three-dimensional models of a muscle that lifts the anus using the Autoplan system allows not only studying the anatomy of the investigated area in vivo, but also planning the course of operations, especially with the use of reticular implants, using the non-exhaustive methods of surgical correction of the pelvic floor. The disadvantages of this method include the inability to conduct research in an upright position (modern computer and magnetic resonance tomographs in Russia are designed for examining patients only in a horizontal position), as well as the impossibility of automatic segmentation in view of the low contrast

of this area, which requires work only in manual mode, and this does not exclude the error in the study.

COMPARATIVE MORPHOLOGICAL CHARACTERISTICS OF THE LEVATOR ANI MUSCLE IN MAN AND RAT

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Key words: *m. levator ani, m. pubococcygeus, m. iliococcygeus, m. pubocaudalis, m. iliocaudalis*

Background. Currently, for the study of pelvic floor disorders, such as urinary incontinence, faeces, pelvic prolapse, are used as a model of white laboratory rats.

Aim. From the point of view of the justification of the modeling of the symptoms of pelvic floor disorders, we set the goal of the study: to make a comparative analysis of the structure of the muscle that raises the anus in a man and a rat.

Material and Methods. In our work we used methods of dissection of cadaveric material, light microscopy, morphometry of muscle fibers, histochemistry.

Results and Discussion. As a result, the main forms of the muscle structure that lifts the anus in rats of both sexes are described: a horseshoe shaped in males, «0» shaped in females. The basic forms of muscle fibers of the muscle that lifts the anus are also determined: in humans, they have a rectangular and rounded section; in rats, tricephalus or polygonal shape. Histochemical examination showed the presence in rats in m. levator ani of predominantly glycolytic fibers in contrast to people where the muscle lifting the anus is represented predominantly by oxidative fibers. Conclusions Histochemical methods revealed fast and slow muscle fibers in m. levator ani rats. Glycolic fibers (type II) are represented in the predominant quantity in rats of both sexes in comparison with oxidative (type I). People m. levator ani predominantly consists of slow oxidizing fibers (Bouorcier, Shafik 1999). This feature may be related to the verticalization of the position, the reduction of the caudal vertebrae and the peculiarity of the location of the pelvic organs with respect to the center of gravity of the earth.

Conclusions. Histological analysis of the metabolic profile of muscle fibers m. levator ani of humans and rats, features of the ultrastructural and macroscopic structure on the one hand makes it possible to use the white rat as an object for experimental study of the symptoms of incontinence of urine and feces, prolapse of internal organs; but on the other hand, it is necessary to take into account the functional peculiarity of the prevailing number of muscle fibers, the ability to train muscles to achieve the effect of conservative treatment of incontinence symptoms.

CLINICAL STUDY OF A NEW METHOD OF REDUCING INTRA-ABDOMINAL PRESSURE IN INCISIONAL HERNIA REPAIR BY SUBLAY MESH

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Key words: *method of reducing intra-abdominal pressure, incisional hernia*

Material and Methods. The clinical study included 20 patients suffered from incisional hernias divided up into two groups (main and control) of 10.

Results and Discussion. In the main group (n=10) hernia repair sublay mesh was used together with the original relaxing incision of anterior rectus sheath (RU 2638685) and in the control group (n=10) the classical sublay mesh was used. The level of the intra-abdominal pressure in the end of the surgery was of 11.7±0.6 mm hg.st. and 14.2±0.5 mm hg.st. However, the day after operation the level of intra-abdominal pressure was of 9.8±0.5 mm hg.st. and 12.3±0.4 mm hg.st in the main and in the control group respectively (p=0.05). Postoperative complications in the main group were not observed. In the control group postoperative complications were detected in 20% of patients during the early postoperative course (seroma of the postoperative wound and paresis of the bowel) and 40% patients had postoperative complications during the late postoperative course (chronic pain) (p=0.05).

Conclusions. So the results show that the original relaxing incision is simple, time-saving and safe operation. It provides substantial reduction ofintra-abdominal pressure and postoperative complications.

SURGICAL ANATOMY OF INTERCOSTAL NERVES IN THE AREA OF THE LATERAL EDGE RECTUS SHEATH

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Key words: *abdominal wall, intercostal nerves, chronic pain*

Aim. To study features ofthesurgical anatomy of intercostal nerves in the area of the lateral edge rectus sheath.

Material and Methods. We investigated 88 floating corpses of both sexes, without pathology of abdominal wall. There were 45% corpses