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Abstracts

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P1.6. FEATURES OF ANTEROLATERAL ABDOMINAL WALL HERNIA SURGICAL TREATMENT

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Introduction: According to literature sources, postoperative ventral hernias occur in 20–26 % of surgical patients. Particular attention is given to patients with anterolateral abdominal wall hernias. The incidence of postoperative hernias in the anterolateral abdominal wall following surgeries on retroperitoneal organs performed via a lumbotomy approach ranges from 1 % in ureteral surgeries to 48.9 % in kidney and perinephric surgeries. This is attributed to the disruption of muscle fibers, nerves, and vessels, leading to muscle hypotonia, atrophy, and fibrosis of the lateral abdominal wall. Treating postoperative ventral hernias of the anterolateral abdominal wall presents significant challenges. The high recurrence rate is associated with the use of hypotrophic, thin muscles of the lateral abdominal wall, inadequately sized endoprostheses, improper fixation of mesh implants, and the application of perpendicular rather than oblique staggered muscle dissection techniques. This approach increases the trauma of surgical access, as restoring muscle fiber continuity becomes difficult. The contraction strength of the muscles far exceeds the tensile strength of the fascial sheaths covering them, and the inevitable or frequent transection of nerves and vessels supplying the musculo-aponeurotic structures contributes to the development of various myofascial defects, both true and neuropathic postoperative hernias. Given the above and the absence of a pathogenetically grounded approach to select.

Methods: A clinical case of a postoperative anterolateral abdominal wall hernia is illustrated by a patient (43-year-old female) treated at the V. T. Zaitsev Institute of General and Urgent Surgery. The patient presented with complaints of protrusion in the postoperative scar area following a right lumbotomy, accompanied by pain and discomfort during physical activity. The patient underwent surgery in 2017 for urolithiasis and a right kidney pelvic calculus, with a procedure involving right-sided pyelolithotomy and kidney stenting. Examination, including clinical and CT findings, revealed a massive right-sided abdominal wall hernia measuring 175×135×100 mm, with a hernia defect width of 90 mm. The hernial sac contained adipose tissue, the right sections of the colon, and loops of the ileum. Reconstructive surgery was indicated.

Results: During surgery, a hernial defect of the anterolateral abdominal wall was identified, through which the hernia sac prolapsed, measuring approximately 18×16×15 cm. Intraoperatively, hypo- and atrophic remnants of the oblique abdominal muscles were found, complicating graft fixation. To prevent mesh migration, it was additionally anchored to the periosteum of the costal arch. The surgical procedure included hernia repair with an alloplastic in-lay anterolateral abdominal wall reconstruction and preperitoneal space drainage and subcutaneous tissue using a dual vacuum drainage system, ensuring adequate and uniform drainage and hemostasis control. The postoperative period was uneventful. Due to active drainage, a moderate amount of serosanguinous discharge was observed, with a decreasing trend by the 5th and 6th postoperative days.

Conclusions: Selecting the optimal strategy for this pathology managing is crucial and requires a tailored approach to ensure favorable outcomes and minimize recurrence rates.

P1.7. Morphological characteristics of ovarian tissue in patients with polycystic ovary syndrome

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Introduction: The aim of the study was to analyze the effect of different surgical techniques on the histostructure of the ovary during the surgical treatment of patients with benign ovarian tumors in polycystic ovary syndrome. The most important stage of the intervention is the choice of the method of influence on the ovary, which would be the least traumatic in order to maximize the preservation of the ovarian reserve.

Methods: We analyzed the use of the most common energy sources in cystectomy: electrodiathermocoagulation, radio wave coagulation and high-frequency welding. The study included 46 patients with polycystic ovary syndrome who underwent planned surgery for benign ovarian tumors, 14 of them using bipolar electrodiathermocoagulation, 14 using bipolar radiowave tissue coagulation, and 18 using high-frequency tissue welding (automatic biological tissue welding generator).

Results: Analysis of samples of electrodiathermocoagulation of ovarian tissue showed the presence of superficial necrosis of ovarian stromal cells and epithelial cells of the follicular apparatus along the edge of the electrodiathermy; epithelial cells underwent electrodiathermy, exfoliated from the walls of cysts and cystic follicles and are located in their lumen. These exfoliated cells have pronounced pyknosis of the nuclei and destruction of the cytoplasm and form small conglomerates. In the ovarian parenchyma, edema and defibrosis of individual stromal fibers are determined. The vessels of the ovarian parenchyma have a dilated lumen with single erythrocytes in it. During radiowave coagulation of tissues, blood vessels are determined along the edge of the coagulation zone, with destruction of the endothelium and diapedetic hemorrhages around the destroyed vessels. In the depth of the ovarian parenchyma, the integrity of the vessel walls remains preserved, however, perdiapedetic hemorrhages are noted in the ovarian parenchyma. The area of radiofrequency coagulation is clearly visible and is represented by superficial coagulation necrosis of ovarian stromal cells. The fibrinoid component in the superficial necrosis of parenchymal cells is not detected, and there is no pronounced edema of the ovarian parenchyma. The welded ovarian tissue boundar is not morphologically contoured, as there is no even minimally pronounced superficial coagulation necrosis of the ovarian parenchyma.

Conclusions: Thus, the study of the histoarchitectonics of resected parts of the ovaries showed that the use of high-frequency tissue welding during surgical intervention is the least traumatic, leads to the preservation of ovarian tissue and, as a result, ovarian reserve, and also minimizes the healing of the injured ovary.