



Inflammatory and cicatrize changes after the suture methods of hernioplasty cause ischemia, atrophic and cicatrize changes in muscles during postoperative period, making these methods of surgery not sufficiently effective.

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ACUTE NECROTIZING PANCREATITIS CLINICAL OUTCOME S AND PROGNOSTIC SIGNIFICANCE OF EXTENT AND LOCATION OF NECROSIS

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Three subtypes of acute necrotizing pancreatitis (ANP) are defined based on the anatomic area of necrotic involvement: isolated pancreatic necrosis (IPN), peripancreatic necrosis (PPN) and combined pancreatic and peripancreatic necrosis (CPN).

The purpose of our study was to compare clinical outcomes of patients with ANP depending on the extent and location of necrosis. A retrospective analysis of database consisting of 91 patients treated for ANP in the period from 2017 to 2019 was performed. Morphologic features of ANP were assessed according to the Revised Atlanta Classification. Patients were allotted to IPN, PPN and CPN groups depending on the extent and location of necrosis on the computerized tomography according to RAC. Organ failure (OF) was determined using Marshall scoring system. Endpoints of the study were defined as OF, need for open surgical intervention, intensive care unit length of stay (LOS) and mortality.

A total of 22 patients (24.2%) were allotted to IPN group, 16 patients to PPN group (17.6%) and 53 patients (58.2%) to CPN group. OF was diagnosed in 49.1% of patients with CPN, with persistent OF occurring in 26.4% and multiorgan failure developing in 30.2% of patients in the group. In IPN and PPN groups, OF occurred in 13.6% and 31.3% of patients. Open surgical intervention was necessary in 4 patients (18.2%) with IPN, 4 patients (25%) with PPN and 27 patients (50.9%) in CPN group. Relaparotomy was required in 13 patients (24.5%) with CPN, no repeated surgery was required in patients with IPN and PPN. ICU LOS was 1.3 (95% CI, 0.49-3) days for IPN, 3 (95% CI, 1-5) days for PPN and 7.2 (95% CI, 4.1-10.3) days for CPN group ($p=0.022$). Mortality rate was 18.9% in CPN group, no mortality was recorded in IPN and PPN groups.

IPN and PPN yield better clinical outcomes when compared to CPN with significantly lower frequency of OF (13.6% and 31.3% vs 49.1%, $p=0.012$), lower number of operated patients (18.2% and 25% vs 50.9%, $p=0.04$) and mortality rate (0% vs 18.9%, $p=0.015$). Early identification of IPN and PPN may guide therapy choices or serve as a prognostic tool.

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METHODS AND MEANS OF VECTOR-PARAMETRIC POLARIZATION MICROSCOPY OF POLICRYSTALLINE FILMS OF RAT BLOOD IN DIFFERENTIAL DIAGNOSIS SEPSIS SEVERITY

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Development and experimental testing of a new digital technique for objective differential diagnosis of septic process severity by statistical analysis of vector-parametric polarization images of laboratory rat blood films. To achieve this goal, we used a set of methods of Stokes polarimetric microscopic examination, parametric, statistical and information analysis of septic changes in the polycrystalline structure of blood films of laboratory rats. An experimental measurement of the coordinate distributions of the fourth parameter of the Stokes vector (crystallization parameter - CP) of digital microscopic images of blood films of laboratory rats was carried out at the location of a laser micropolarimeter, the optical scheme of which is given in scientific papers is presented in our work.

For the purpose of a more detailed study of the polycrystalline structure of rat blood films, we used the following information selection method. From the entire calculated coordinate set of



values of the fourth parameter of the Stokes vector of the digital microscopic image of the object of study, samples of certain extreme (characteristic) values were formed the maximum crystallization level of the optically anisotropic component of the biological preparation. The structure of the study of the polycrystalline component of rat blood in the differential diagnosis of the severity of the septic state using digital. Stokes polarimetric microscopy consists of the following experimental and analytical steps: A. Formed representative sets of samples of polycrystalline blood films of the following groups of rats: 1. Intact rats - "control" group 1 (39 samples) 2. Sick rats (sepsis - light form) - "research" group 2: a) duration 12 hours. (39 samples) - research subgroup 2.1; b) duration 48 hours. (39 samples) - "research" subgroup 2.2. 3. Sick rats (sepsis - middle form) - "research" group 3: a) duration 12 hours. (39 samples) - research subgroup 3.1; b) duration 48 hours. (39 samples) - "research" subgroup 3.2. 4. Sick rats (sepsis - severe form) - "research" group 4: a) duration 12 hours. (39 samples) - research subgroup 4.1; b) duration 48 hours. (39 samples) - "research" subgroup 4.2. A structural-logical scheme and design of a phase-metric study of microscopic images of blood films of laboratory rats has been developed. A model analysis of the polycrystalline structure of blood films of laboratory rats is proposed. The optical arrangement of the system of phasometric mapping of microscopic images of blood films of laboratory rats was experimentally tested. An album of maps of the distribution of phase magnitude of the points of the digital microscopic image of blood films of rats from control group 1 and research groups 2–4 with different severity of septic pathology was obtained. The statistical significance of the differentiation of phase maps of microscopic images of polycrystalline blood films of rats from control group 1 and research groups 2–4 with different severity of septic pathology was determined. The most diagnostic-sensitive statistical criteria for differentiating phase maps of the microscopic image of polycrystalline blood films of rats from control group 1 and research groups 2 - 4 with different septic pathology severity were found. The operational characteristics of the diagnostic strength of the method of polarization-phase microscopy of polycrystalline blood films of rats of the control and experimental groups are determined.

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**EFFECT OF ORAL PHYTOGEL «QUERTULIN» APPLICATION IN CASE OF
BIOCHEMICAL INDICATORS OF RENAL CONDITION IN RATS WITH
EXPERIMENTAL DYSBIOTIC SYNDROME**

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Phytogel "Quertulin" contains the bioflavonoid quercetin, prebiotic inulin and calcium citrate formulated into CMC-Na gel with mint leaf extract. It has antioxidant, membrane-protective activity (due to quercetin) and antidiabetic action (due to inulin).

The objective of our research is to study the effect of oral phytogel «Quertulin» application in case of biochemical indicators of renal condition in rats with experimental dysbiotic syndrome (EDS). Kidneys conditions were assessed by biochemical markers such as elastase activity, malondialdehyde (MDA) quantity; inflammation process markers: catalase activity, prooxidant-antioxidant index (PAI); antioxidant protection markers, urease activity; nonspecific resistance marker. We applied the phytogel "Quertulin", lincomycin in ampoules of 2 ml of 30% solution, adrenaline hydrochloride in ampoules 1 ml of 0.18% solution. EDS was reproduced in rats by giving them the lincomycin with drinking water at a dose of 60 mg/kg within the first five days of the experiment. In order to enhance the degree of dysbiosis in rats, starting from the 7th day of the experiment, oral applications of the gel containing adrenaline (0.18 mg/ml) were made at a dose of 1 ml/kg for 3 days. 21 Wistar rats (females, 11 months) were used in the experiment, divided into three equal groups: 1st – control group, 2nd – the group with reproduced dysbiosis associated with adrenaline stress and 3rd – the group with experimental dysbiotic syndrome (lincomycin + adrenaline). 3rd group received oral applications of phytogel "Quertulin" at a dose 1 ml/kg for 3 days, starting from the 7th day of the experiment. On 10th day rats were euthanized under thiopental anesthesia by total cardiac bleeding. The activity of urease and lysozyme was determined in blood