МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»

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Конференція внесена до Реєстру заходів безперервного професійного розвитку, які проводитимуться у 2023 році №5500074

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of the joint space, whereas an ultrasound examination of the joints may show an increase in the amount of synovial fluid. In case any doubts arise, the puncture of the joint and the culture of synovial fluid, as well as the magnetic resonance imaging of the affected joints are advisable.

Conclusions. Thus, a differential approach to diagnosing and treating the children with coxitis has made it possible to distinguish clinical groups with specified diagnoses, which had an impact on further treatment tactics.

Rotar O.V.

COVID-19 INFECTION WORSENES PROGNOSIS IN PATIENTS WITH ACUTE NECROTIZING PANCREATITIS

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Introduction. COVID-19 has led to an unprecedented global health crisis. It primarily affects the respiratory tract, but previous reports of acute pancreatitis occurrence in patients with COVID 19 suggest possibility of direct injury of pancreatic gland by this virus.

The aim of the study: was to establish influence of COVID 19 infection on acute pancreatitis futures.

Material and methods. We present observation of three patients with acute necrotizing pancreatitis (ANP) and concomitant COVID-19. They were medium age persons with biliary and alimentary etiology of disease and BMI 33-41 kg/m^2. Severity of patients' condition were estimated by whole body CT, changes of oxygen balance and biochemical parameters of peripheral blood.

Results. All patients were diagnosed with COVID-19 within 4-9 days before initiation of ANP with bilateral pneumonia of 15-40% of lungs on CT. They were presented with persistent multi-organ failures and injuries over 50% of pancreas. Respiratory failure was established in all patients, renal and cardio-vascular dysfunction as well as intra-abdominal hypertension was diagnosed in two of them. Biochemical changes included prolonged prothrombin and partial thromboplastin time, elevated fibrinogen and D-dimer concentration (640-2580 μg/l) with normal amount of platelets as well as moderate hypertriglyceridemia (6.2-9.5 mmol/l). They received intensive care treatment with respiratory support, interventional treatment was applied to all of them with step-up approach. Diffuse hemorrhage from pancreas occurred in one patient on 6th day from onset as result of coagulopathy and several laparotomic interventions were necessary for control of it. Despite intensive therapy this patient died due to progressed ARDS (overall mortality - 33.3%). Rest patients survived, duration of intensive care treatment was 14-20 days.

Conclusions. COVID-19 infection worsens clinical feature of ANP. Severity of coagulopathy and ARDS could be determinants of negative outcome.

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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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Introduction. 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 in fig. 1.

The aim of the study: for the purpose of a more detailed study of the polycrystalline structure of rat blood films, we used the following information selection method.

Material and methods. 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.

Results. 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.

Conclusions. 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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COMPARISON OF INDICATORS OF SPERMIOLOGY RESEARCH BEFORE AND AFTER COVID-19

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Introduction. COVID-19 is a disease that causes a wide range of damage to various organs and systems. It is important to assess the impact of the virus on reproductive health. Currently, there is insufficient information on the fertility status of men who have experienced COVID-19.

The aim of the study: to investigate the impact of COVID-19 on the results of spermiological research.

Material and methods. An analysis of the results of the examination of 65 men was carried out on the basis of the Medical Center for the Treatment of Infertility in Chernivtsi. Spermograms were examined in accordance with WHO recommendations in 2000, using an Olympus CKX-41 inverted microscope in a Makler chamber. The Statistica 10 program was used for statistical data processing.

Results. The average age of the men included in the study was 32.48±7.96 years. A statistical analysis of the indicators of spermiological research before and after the transfer of COVID-19 was carried out. The study included patients with subfertility conditions - mainly asthenoteratozoospermia (93.8%). These patients applied for examination due to the absence of pregnancy in the wife during the year. In all men, the results of a laboratory examination for the