

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
ВИЩИЙ ДЕРЖАВНИЙ НАВЧАЛЬНИЙ ЗАКЛАД УКРАЇНИ  
«БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»**



## **МАТЕРІАЛИ**

**101 – ї**

**підсумкової наукової конференції**

**професорсько-викладацького персоналу**

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Thus, the high level of serum aminotransferases is not a risk factor for acute pancreatitis development in the examined population from the position of the gene *IL-4* (rs 2243250) polymorphism.

**Karliychuk M.A.**

**TOMOGRAPHY PECULIARITIES OF RETINAL STRUCTURAL CHANGES IN  
PATIENTS WITH TYPE II DIABETIC MELLITUS DEPENDING ON THE SCLERAL  
LAMINA CRIBROSA THICKNESS**

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Diabetes mellitus (DM) is a global medical and social issue caused not only by its widespread prevalence but also by the development of severe multisystem complications. Optic nerve damage with diabetes (diabetic optic neuropathy), according to various authors, is found in 7-30.7 % of patients with DM. It is one of the causes of disability and in the majority of patients is detected lately – at the stage of irreversible death of a large number of neurons. Current theories of pathogenesis cover only certain aspects of the development of the disease. Therefore, the study of the new links of the pathogenesis of diabetic optic neuropathy (DON), the development of effective ways of its early diagnosis and therapy becomes an urgent issue of modern ophthalmology.

The assumption of the existence of a relationship between biomechanical peculiarities of the scleral lamina cribrosa (LC) and retinal morphology changes in patients with type II DM seems to be logical.

The objective of the study was to identify the peculiarities of the retinal structural changes in patients with type II DM depending on the scleral LC thickness. 575 patients (1150 eyes) with type II DM and 50 healthy persons (100 eyes) were examined. LC thickness was measured by SD optical coherent tomography using *LC\_Thickness\_programm.m* and *main\_low\_noise\_filters\_programm.m*, based on the adaptive compensation algorithm for eliminating a high-level noise in the deep layers of the optic nerve and improving the visualization of the posterior border of the LC, as well as for processing B-scan with a set of 3 digital filters: Butterworth Low-pass Filter inversion image, Wavelet Low-pass Filter Analysis Daubechies original and inversion image. An average retinal thickness in the fovea, para- and perimacular zones with diameter of examination in 1 mm, 3 mm, 5 mm, respectively were analyzed. The retinal thickness in the superior and inferior halves, in the temporal, nasal and inferior quadrant of the para- and perimacular zone was determined. In the 1<sup>st</sup> group (78.9% of eyes of diabetic patients) a mild thickening of LC (<700 μm) was observed; in 17.6% of eyes (the 2<sup>nd</sup> group) a moderate thickening (700-900 μm), and in 3.8% of eyes (the 3<sup>rd</sup> group) – a significant thickening (<900 μm) was observed. The retinal thickness in the foveolar zone in patients with a moderate LC thickening is 17.1% higher, in patients with a significant LC thickening is 15.6% lower, an average thickness of the paramacular zone in patients with a moderate LC thickening is 7.4% higher, and in patients with a significant LC thickening is 4.4% lower. An average thickness of the perimacular zone in patients with a moderate LC thickening is 6.6% higher, and in patients with a significant LC thickening is 6.4% lower than that in controls.

Thus, as conclusion, we can suggest that tomography peculiarities of retinal structural changes in patients with type II DM depend on the LC thickness.

**Kozariichuk N.Ya.**

**CERTAIN THERAPEUTIC APPROACHES TO META-HERPETIC KERATITIS  
TREATMENT: CASE REPORT**

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Meta-herpetic keratitis is described as a structural damage by the immune and inflammatory mechanisms as a consequence of HSV-1 corneal infection (Liesegang, T.J. 1999). Meta-herpetic



corneal disease is considered as a chronic or chronic recurrent superficial post-herpetic corneal inflammation without any detectable HSV-1-activity. Meta-herpetic erosion, ulcer and bullous keratopathy are the main types of meta-herpetic corneal disease.

The objective of the study is to evaluate the steps in the therapeutic approach for meta-herpetic corneal ulcer. The 6 months of follow-up results of the case were determined.

Case report: 50-year-old male admitted with the symptoms of tearing, photophobia, redness and blurred vision in the left eye. He had a history of right recurrent HSV-1 epithelial keratitis in the last 2 years. He had been treated with only topical antiviral medications. The last episode of HSV-1 epithelial keratitis occurred 4 months ago. Visual acuities on admission were 0.01 in the left eye and 1.0 in the right eye. Biomicroscopic examination of the left eye found a centrally located deep corneal ulcer with smooth edges associated with stromal inflammation and descemet folds. Biomicroscopic examination of the right eye and fundus examination of both eyes were normal. The intraocular pressures by Maklakov tonometer were 19 mm and 18 mm Hg respectively. The corneal scraping specimens for bacterial and fungal cultures were negative. The patient was diagnosed with meta-herpetic corneal ulcer in the left eye.

The treatment tactics includes valacyclovir 500 mg three times a day, fibronectin drops prepared from the patient's serum, vitamin C, vitamins group B, and dexpahtenol. Biomicroscopic examination at the 2<sup>nd</sup> week of follow-up found healing of corneal ulcer, decrease of stromal inflammation with the resolution of descemet folds. Patient's examination at the 6<sup>th</sup> month of treatment determined an increase in VA of the left eye to 0.2.

Valacyclovir 1000 mg twice a day is found to be as effective as acyclovir 200 mg five times a day (Perry, C.M.,Faulds, D.1996). Deep central corneal ulcer and peripheral corneal neovascularization were resolved with this treatment at the end of 6<sup>th</sup> month.

Thus, meta-herpetic keratitis is difficult to treat. Therefore, as conclusion, we recommend early initiation of systemic antiviral therapy in combination with a proper use of topical steroids, vitamin C, vitamins group B, dexpahtenol and fibronectin eye drops.

**Maksymyuk V.V.**

## **NEW PATHOGENETIC ASPECTS OF ACUTE NECROTIZING PANCREATITIS**

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Disorders in the redox equilibria in acute pancreatitis (AP) are known to be accompanied by the transformation of peroxide reactions, transforming them from adaptation to the damaging ones. In this case, free radicals of oxygen are not only a direct damaging factor of pancreatic cysts and endothelium of blood vessels, but also signaling molecules. They trigger the synthesis of cellular adhesion molecules, cytokines and proapoptotic compounds, and also can activate pancreatic enzymes. It is accompanied by a deepening of necrotic lesions of the pancreas tissues and an increase in endotoxiosis. However, mechanisms for the development of such harmful reactions, especially in the tissues of the pancreas and distant organs, with AP, require a more thorough study.

The experimental research involved 63 sexually mature rabbits "Gray giant" weighing from 8 to 10 kg, in which acute necrotic pancreatitis (ANP) was simulated according to the developed method by ligating the main pancreatic duct followed by an injection of bile solution with trypsin into the pancreas parenchyma (utility model patent number 66667).

In order to study the processes of POM in the tissues of the pancreas, liver and lungs some histochemical research was carried out using original techniques of I.S. Davydenko.

The ratio of the activity of antioxidant defense (AOD) and (LPO) of the blood was carried out by determining the integral index (coefficient K) by the method of E.V. Chuyanova.

In conducting the research, we followed the generally accepted world and national standards for carrying out research in the field of biology and medicine, namely: Vancouver Convention on Biomedical Research (1979,1994) and other legislative acts in force in Ukraine.