МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ

М А Т Е Р І А Л И

106-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького колективу
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Матеріали підсумкової 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) – Чернівці: Медуніверситет, 2025. – 450 с. іл.

У збірнику представлені матеріали 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) зі стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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oxidation system in purulent rhinosinusitis indicate depletion of the body's internal reserves to maintain adequate homeostasis. In patients with chronic maxillary sinusitis in the acute stage, in contrast to patients with acute maxillary sinusitis, disorders in the cellular immunity system and manifestations of "oxidative stress" are more pronounced, the indicators of functional and metabolic activity of neutrophils, the cytokine link and the complement system are less altered, which must be taken into account when prescribing treatment. The authors note that traditional complex treatment completely or partially corrects the impaired indices of immune and oxidative status in patients with acute maxillary sinusitis. In patients with exacerbation of chronic maxillary sinusitis, this treatment has virtually no effect on the altered indices. When studying antimicrobial immunity in patients with purulent maxillary sinusitis, it was found that the elimination of infection in the body is performed by cells with phagocytic properties, immunoglobulins and complement. The course and outcome of the inflammatory reaction depend on the reaction of neutrophilic granulocytes, which are the first to fight the infectious agent. In patients with diabetes mellitus, the work of a number of complexes responsible for cellular respiration is impaired, which leads neutrophils and other elements of the immune system to a state of hypoxia. As a result, the biocidal activity of phagocytic cells decreases, which entails a decrease in the phagocytic activity of neutrophils. In studies of neutrophil metabolism in patients with chronic purulent maxillary sinusitis with a history of diabetes mellitus, it was found that carbohydrate metabolism processes are significantly reduced in neutrophils, as well as the activity of succinate dehydrogenase, which is the main element in tissue respiration. The data obtained indicate that neutrophils are in a state of hypoxia.

Conclusions. Analysis of the presented literature data on lipid metabolism in acute and chronic rhinosinusitis in patients with diabetes mellitus indicates the role of hypoxia in which all immunological components are. This does not allow the body to fully effectively fight the disease, dictates the need to develop new treatment methods using antioxidants to affect the functional and metabolic activity of phagocytic cells and stabilization of cellular respiration in all its links.

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PREVALENCE OF REFRACTIVE DISORDERS IN AMBLYOPIA

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Introduction. Amblyopia is one of the most common eye conditions in childhood. It is an ophthalmological disorder characterized by a persistent reduction in visual acuity in one or both eyes, which cannot be corrected with glasses or contact lenses. The global prevalence of amblyopia ranges from 1 to 10%. Uncorrected ametropia not only leads to reduced visual acuity and the absence of binocular vision but can also cause neurosis, delay in overall child development, and sometimes restrict career choices, potentially resulting in disability. According to the literature, in the overall structure of primary visual disability in Ukraine, 25% are children with disabilities, and among them, 10% have severe amblyopia. It underscores the need for timely detection of refractive anomalies and an understanding of correction methods to prevent the onset of amblyopia.

The aim of the study. To determine the prevalence of refractive pathology in amblyopia. Given that the issue of refractive anomalies holds not only medical but also social significance, there is a need for timely detection of refractive anomalies, as well as a comprehensive approach to the treatment and prevention of amblyopia.

Material and methods. The study involved 42 children aged 3 to 15 years. With optimal optical correction after cycloplegia, visual acuity with foveal fixation of the amblyopic eye was assessed. Four degrees of amblyopia are distinguished based on the level of persistent vision reduction: mild (visual acuity 0.8-0.4), moderate (visual acuity 0.3-0.2), high (visual acuity 0.1-0.05), and very high (visual acuity 0.04 or lower). The following research methods were used: visometry, keratorefractometry, skiascopy, retinoscopy, ophthalmoscopy, biometry, and determination of eye position by Hirschberg's method.

Results. Among the examined children, hypermetropia was observed in 21%, complex hypermetropic astigmatism in 19%, mixed astigmatism in 18%, myopic astigmatism in 19%, and

myopia in 23%. Hypermetropic astigmatism was predominant in amblyopic eyes in 53% of cases. Even at an early age, children exhibit a functional relationship between the optical and oculomotor systems, so in addition to the refractive component, the condition of the oculomotor apparatus, accommodation, and convergence also play a role in the development of amblyopia. The distribution by type of amblyopia was as follows: refractive amblyopia in 59%, disbinocular in 38%, and anisometropic in 3%.

Thus, the accuracy of ametropia correction is essential for conducting effective rehabilitation measures and preventing disability in children with amblyopia. Among the children, mild amblyopia was observed in 56.6% of cases, moderate in 30.1%, and severe in 13.3%.

Conclusions. Hypermetropic astigmatism is more commonly observed in amblyopic eyes. Early, complete optical correction not only optimally corrects vision but also serves as a preventive measure against the development of amblyopia and helps achieve maximum possible visual function at different stages of visual analyzer development. When implementing various corrective programs, it is important to remember that a sustained therapeutic effect is achieved only through systematic and comprehensive treatment. Visual impairment or loss has a negative impact on internal organ function and adversely affects physical and mental performance. We can state that the majority of older children who received timely correction demonstrated higher visual function without limitations in career choice or disability.

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SPECIFIC CHANGES OF PHOTOLUMINESCENT PARAMETERS OF VENOUS BLOOD PLASMA IN ACUTE PANCREATITIS

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Introduction. Informative diagnostics of different forms of acute pancreatitis and its complications is one of the most difficult problems in emergency abdominal surgery. Diagnostic probability of standard laboratory and instrumental methods does not exceed 80%, which in some cases leads to diagnostic pitfall. This makes actual problem search for new, informative diagnostic parameters.

The aim of the study. Study changes in blood in acute pancreatitis.

Material and methods. The study involved 25 healthy donors (the first group) and 61 patients, among which with acute destructive cholecystitis - 15 (the second group), perforating gastroduodenal ulcers - 13 (the third group), acute destructive pancreatitis - 33 (the fourth group). In order to assess the informativeness of photoluminescent diagnostics, determination a luminescence spectra of venous blood plasma were carried out. Irradiation a monochromatic laser beam of blood plasma was performed. Laser radiation source was an argon laser LGN-503, which emits at a wavelength of 458 nm with a power of 200 mW. Statistical deviation in intensity measurements on a given apparatus were 2-3%. For decode the luminescence spectrum of human blood plasma as the reference radiation source used a temperature lamp TRSH 2850-3000.

Results. It was established that luminescence of human blood plasma was in the wavelength λ = 460 - 800 nm. Thus, in the fluorescence spectra of healthy people observed the characteristic maximum of intensity at wavelength λ = 474-475 nm. In patients maximum indicators of fluorescence capacity in this area displaced to the short range, starting from the wavelength λ = 471 nm, and their absolute parameters were much lower.

As a result of comparative analysis in patients of the second, third and fourth groups characteristic differences of the spectral distribution of peak values fluorescence intensity were found. In particular, acute destructive cholecystitis maximum parameters were observed at a wavelength λ = 470 nm, with perforations of gastroduodenal ulcers - at a wavelength λ = 468 nm, and in acute destructive pancreatitis - at a wavelength λ = 466 nm. That is, in the fourth group of patients the largest fluorescence intensity shifted to shorter range, when comparing to that of other groups. Obtained results were the basis for working out a new method of fluorescent diagnostics of acute destructive pancreatitis (invention application № u 2011 01328). Diagnostic sensitivity in our