

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



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101 – ї

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професорсько-викладацького персоналу

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The development of acute necrotic pancreatitis in the experiment is characterized by an increase in the activity of lipids and proteins in the blood and the oxidative modification of proteins in pancreaticocytes, hepatocytes and alveocytes, which is one of the leading mechanisms for their lesion. The growth of the oxidative modification of proteins in the endothelial cells of the pancreas, liver and lungs in the development of acute pancreatitis contributes to the occurrence of endothelial dysfunction, which is the leading factor in the secondary lesions of these organs.

Particular attention should be also drawn to the fact that in the early stages of development of acute pancreatitis, the activity of LPO closely directly significantly correlates with POM in pancreaticocytes and endothelial cells of the pancreas while such a connection can not be traced in case of the initial development of necrotic lesions of pancreatic parenchyma and its subsequent progression. The above is likely to indicate that the rapid growth of the activity of the PO processes initiates the processes of POM in the pancreatic tissues, which causes triggering the local alteration mechanism. Further development of the latter is potentiated by its own non-oxidant factors and is characterized by universality, which implies an accelerating effect on both the parenchyma of the pancreas and tissues of distant organs. The mechanism of alteration of the POM growth in tissues may mean that intracellular growth of POM is a possible indication of the activation of ubiquitin-dependent proteolysis, which may be non-protective (regulation of the rate of transcription and cell cycle, apoptosis, proliferation, differentiation and repair, the immune system) in nonphysiological conditions, but, on the contrary, it can be damaging.

Thus, considering the important role of processes of lipoperoxidation and oxidative modification of proteins in mechanisms of progression of acute necrotic pancreatitis, it is pathogenically grounded to develop new effective methods of systemic and local antioxidant and anti-proteolytic effects.

Penishkevich Ya.

**OPHTHALMIC TOPICAL ANTIBACTERIAL AGENTS:
CURRENT AND EVOLVING OPTIONS**

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Due to vision-threatening factors eye infections (EI) must be treated effectively by appropriate and safe use of topical ophthalmic antibiotics (OA). Thus, since ocular surface bacterial infections affect subjects of all ages with a high frequency in newborns and children there is necessity of distinguishing current and evolving treatment options for the various types of these EI.

In order to define the well-established uses of anti-infective eye drops in the field of ocular infections published scientific literature was reviewed. All parts of the eye may be infected by bacteria, fungi, parasites, or viruses. Anti-infection agents such as antibiotics (ATB), antiseptics, antifungal, anti-helminths or antiviral drugs can be used depending on the type of infection.

Ocular surface infection considers the use of ATB in cases of bacterial conjunctivitis, blepharitis, bacterial keratitis etc. Special regimens are used for patients in perioperative prophylaxis, endophthalmitis prevention, cases of intravitreal injection, for newborns, and cases of ocular trauma.

As an example, bacterial conjunctivitis is a microbial infection involving the mucous membrane of the eye surface. This condition is usually a self-limited disease. Purulent bacterial conjunctivitis, characterized by mucopurulent discharge and hyperemia, affects the subjects of all ages, but is particularly frequent in children. It represents one of the most common ocular diseases in childhood, occurring approximately in 1 out of 8 children each year. Bacterial infection is a common cause of conjunctivitis and accounts for up to 50% of all cases of conjunctivitis in adults and 70% to 80% of all cases in children. Globally, purulent bacterial conjunctivitis is mainly caused by gram-positive organisms. The most common causative agents are *Staphylococcus epidermidis* (39% of cases), *Staphylococcus aureus* (22% of cases), and *Streptococcus pneumoniae* (6% of cases). The most common gram-negative microorganism found in acute conjunctivitis is



Haemophilus influenzae (9% of cases). In contact lens wearers, the tendency is reversed and more gram-negative strains are found. However, other bacterial strains can less frequently cause bacterial purulent conjunctivitis. Although bacterial conjunctivitis can occur at any age, it frequently occurs in preschool- and school-age children. In these age groups, pathogens are frequently associated with epidemic occurrences of bacterial conjunctivitis. In infants, children and teenagers, the most common ocular pathogens are *Staphylococcus aureus*, *Haemophilus influenzae*, *Streptococcus pneumoniae*, and also *Moraxella* species.

Most cases of acute bacterial conjunctivitis resolve spontaneously within 7–10 days, but a broad-spectrum antibiotic can decrease disease severity, transmission and also minimize the complication and reinfection rates. Practice patterns for prescribing topical antibiotics vary. Most practitioners prescribe a broad-spectrum agent on an empirical basis without culture for a routine, mild-to-moderate case of bacterial conjunctivitis and instruct patients to seek follow-up care if the expected improvement does not occur or if vision becomes affected.

Safe and effective topical antibiotic eye drops for the treatment and prevention of ocular infections must be adapted to the type of bacteria suspected. Usual topical antimicrobial agents should be replaced by more recent and more effective treatments. The use of highly effective fluoroquinolones should be reserved for the most severe cases to avoid resistance. Short treatment courses, such as azithromycin, can be easily used in children, thereby improving quality of life.

Sheremet M.I.

PROGNOSIS OF REMOTE RESULTS OF SURGICAL TREATMENT OF NODULAR ENDEMIC GOITER WITH AUTOIMMUNE THYROIDITIS

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Autoimmune thyroiditis refers to one of the most important and topical problems of modern endocrinology.

Surgical treatment was performed in 95 patients with unilateral nodular and multinodular goiter with autoimmune thyroiditis. Determination of markers for prediction of clinical course and the choice of the volume of surgery in patients with endometrial nodules against the background of autoimmune thyroiditis, taking into account the activity of oxidative, autoimmune and apoptotic processes.

The activity of peroxide oxidation and the state of antioxidant systems (AOS) by determining the level of oxidative modification of proteins (OMP) in serum, the activity of ceruloplasmin (CP); in erythrocytes – the content of malonic aldehyde (MA), the activity of glutathione peroxidase (GP) and catalase (CT) were estimated according to conventional methods in patients of both subgroups before the surgery and during the remote postoperative period. In addition, the hormonal function of the thyroid gland, the level of thyroperoxidase antibodies (TPOAB), the level of thyroglobulin antibodies (TGAB) and structural changes in the gland (volume of the gland, nodular formation) according to ultrasound scan were studied.

The content of lymphocytes bearing the apoptosis marker – the CD95+ receptor, the level of apoptosis in the population of peripheral annexin V+lymphocytes, the content of tumor necrosis factor- α (TNF- α) in blood plasma, the concentration of interferon- γ (IFN- γ) and interleukin-1 β (IL-1 β) were studied. These indices were studied using the standard diagnostic kits according to the technology recommended by the manufacturer.

In order to determine the norm indices for the region and to conduct a comparative assessment, the same indices were studied in 25 apparently healthy female donor women aged 21-42 years.

Hemithyroidectomy in patients with NEGAIT is indicated in case of unilateral one-node and multi-nodular goiter, when the volume of the thyroid lobe without nodes is not larger than 10 cm³; tissue of the thyroid remain is characterized by uniform echo structure of all sections of the thyroid lobe, diffuse even decrease in the parenchymal echogenicity; the thyroid gland contours are clear