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ВИЩИЙ ДЕРЖАВНИЙ НАВЧАЛЬНИЙ ЗАКЛАД УКРАЇНИ
«БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»**



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101 – ї

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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 2nd week of follow-up found healing of corneal ulcer, decrease of stromal inflammation with the resolution of descemet folds. Patient's examination at the 6th 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 6th 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.

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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.



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.

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**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