



Also, it has been suggested that patients who undergo allergy tests or desensitization should not use beta-blockers of any kind, even local agents, because beta-blockade may make resuscitation more difficult if anaphylaxis occurs. The usage of beta-blockers in neonates is excluded because of the apnea development. The less clear is the fact that beta-blockers can have an undesirable effect on plasma lipids.

Among analyzed ocular side effects were: 1. Very common (10% or more): Burning/stinging sensation (up to 38%), blurred/abnormal vision (up to 25%). 2. Common (1% to 10%): Conjunctival hyperemia, foreign body sensation, keratitis, conjunctivitis, cataract, decreased visual acuity. 3. Frequency that is not reported: Itching, tearing, redness, blepharitis, dry eyes, decreased corneal sensitivity, corneal erosion, refractive changes (due to withdrawal of miotic therapy in some cases), diplopia, ptosis and choroidal detachment following filtration surgery, discharge (e.g., crusting), foreign body sensation, cystoid macular edema, pseudophthalmos.

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### **IMPROVEMENT OF ANTIOXIDANT STATUS IN SMALL INTESTINE DURING ACUTE NECROTIZING PANCREATITIS**

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Septic complications are leading causes of unfavorable outcome during acute necrotizing pancreatitis (ANP). Disorders of mucosal metabolism proposed as main mechanism of intestinal hyperpermeability and subsequent bacterial translocation phenomena. Therefore, aim of our research was to study the disorders of antioxidant status during of ANP and evaluate possible positive influence of N-acetylcysteine (NAC) on such events.

In 120 Wistar rats acute necrotizing pancreatitis was induced by intraperitoneal injection of 250 mg/100 g of 20% L-arginine solution twice during 1 hour period. NAC was infused 70mg/kg per day in N group, similar amounts of normal saline – in controls (C). Changes of pro- and antioxydative status, connective tissue markers, proteolytic activity in small intestinal mucosal layer have been investigated during first 72 hours of AP.

In C group ANP was accompanied by activation of oxidant stress. Concentration of diene conjugates and malonaldehyde increased since 12 hours after AP initiation and reached maximum in 24 hours: levels exceeded values of intact rats on 22% and 10% accordingly ( $p < 0,05$ ). Their neutralization occurred after 72 hours as a result of activation of antioxidant defense: superoxide dismutase and the catalase concentrations has been raised in 1,6 and 1,7 times ( $p < 0,05$ ). Administration of N-acetylcysteine increased amount of reduced glutathione in mucosal layer of small intestine, decreased level of its injury by free oxygen radicals as well as ameliorated inflammation process in pancreas during 24-48 h.

Deficiency of reduced glutathione during early terms of ANP is followed by toxic action of oxidants on pancreas and small bowel mucosae. Administration of NAC in dose of 70 mg/kg improves oxidant stress in small intestinal mucosae within 24-48 h.

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### **DYNAMICS OF SPECIES COMPOSITION CHANGES OF LEADING PATHOGENS AND THEIR ASSOCIATES OF CHRONIC WOUND BIOFILMS**

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Infection can lead not only to chronic wounds but also to gangrene, loss of the infected limb, and death of the patient. More recently interrelations between bacterial colonization and increases in reactive oxygen species leading to formation and production of biofilms have been shown to generate chronic wounds. Similar to ischemic bacterial colonization infection damages tissue by causing a greater number of neutrophils to enter the wound site. In patients with chronic wounds, bacteria with resistances to antibiotics may have time to develop. In addition, patients that carry drug resistant bacterial strains such as methicillin-resistant *Staphylococcus aureus* (MRSA) have more chronic wounds.

The dynamics of changes in the leading pathogens and their associates of soft tissues purulent necrotic processes biofilm in 52 patients was investigated. Diabetic foot syndrome was observed in 65.39%, chronic arterial failure – 7.69% and chronic venous insufficiency – 26.92%. The material was collected in accordance with the existing recommendations in admission after 7 and 14-21 days of treatment. It is found that the main pathogens are gram positive aerobic and facultative anaerobic microorganisms (*S.aureus*, *S.epidermidis*, *S.pyogenes*, *S.hemolyticus*, *Enterobacteriaceae*, including *E.coli*).

The contamination of the biotope in the process of treatment significantly varies within 14-21 days that must be taken into account in the treatment of such patients.