

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



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101 – ї

підсумкової наукової конференції

професорсько-викладацького персоналу

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**THE POSSIBILITY OF SERRATIOPEPTIDASE APPLICATION IN A
COMPREHENSIVE TREATMENT OF ELDERLY PATIENTS WITH COMMUNITY-
ACQUIRED PNEUMONIA AND CONCOMITANT DIABETES MELLITUS TYPE II**

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The treatment of elderly patients with community-acquired pneumonia (CAP) and concomitant diabetes mellitus type II (DM II) is an actual and not completely resolved internal medicine problem. Sanogenetic and resolutive processes in this category of patients are in complete and time consuming compared to patients with out diabetes mellitus due to immunopathological changes. The course of pneumonia in patients with DMII is also characterized by an increased tendency to complications due to the development of microangiopathy associated with glycosylation processes, oxidative stress, endothelial ischemia. Diabetic angiopathy and widespread atherosclerotic processes lead to decreased vascular permeability due to the tightening of the basement membrane of the vascular wall due to proliferation and hyalinization of the intima. The nervous regulation of respiratory mechanics is also impaired due to segmental demyelination of axons. These factors contribute to impaired lung ventilation, lung tissue ischemization, bronchial obstruction, and decreased oxygenation of the blood.

The objective of the study is to optimize the treatment of elderly patients with with CAP and concomitant DM II by including the drug serratiopeptidase in the treatment regimen.

34 patients with CAP from 65 to 83 years of age were observed. The inclusion criteria in the study were the following: the presence of X-ray-confirmed pulmonary tissue infiltration, clinical signs of CAP (productive cough, hyperthermia, chest pain, percussion and auscultatory signs of focal lung tissue consolidation), corresponding changes in clinical and laboratory tests, presence of compensated moderate severity DM II. Patients with serratiopeptidase intolerance, severe lesions of the cardiovascular system and kidneys, severe CAP, decompensation of DM II were excluded from the study.

Oral serratiopeptidase tablets were administered 0,02 twice per day for 20 days in a comprehensive treatment of the studied patients of the main group (18 patients), in addition to the drugs prescribed by the Ministry of Public Health of Ukraine Order 128 (combined antibiotic therapy, expectorants), № 1118 (dietary nutrition, hypoglycemic drugs). The comparison group consisted of 16 individuals who received similar therapeutic complex without serratiopeptidase.

In conducting radiological examination on the 14th day of treatment in studied patients, a significant decrease of inflammatory infiltration of the lung tissue was observed in 11 patients (61.1%) of the main group, while a positive radiological dynamics was observed in 7 patients (27.3%) of the comparison group. A positive effect of serratiopeptidase was also that the course of diabetes in the main group remained stable, while at the same time, 4 patients in the comparison group were recommended insulintherapy due to decompensation of diabetes.

Serratiopeptidase is a valuable agent that can stimulate the resolution processes in the lung tissue. Studies on the effect of this drug on the immune status of patients suffering from chronic and acute respiratory system lesions with concomitant DM II are perspective.

Mikulets L.V.

**CIRCADIAN RHYTHMS OF PROTEOLYSIS INDICES IN PATIENTS WITH
RHEUMATOID ARTHRITIS**

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Violation of biological rhythms of the body leads to the emergence of diseases, which are also characterized by a certain rhythm. Rheumatoid arthritis (RA) is characterized by cyclicality of clinical symptoms and its relationship with the level of pro-inflammatory cytokines.



The aim of the study was to study the daily fluctuations of proteolysis in patients with rheumatoid arthritis.

The survey involved 15 patients with RA. The age of patients was from 28 to 57 years. The middle age constituted 42 ± 9.1 years. Control group ($n = 10$) - practically healthy subjects are representative by age and gender. The evaluation of proteolytic activity was performed by the determination of collagenolytic activity (CA), low molecular weight proteolysis (PNMP) and high molecular weight proteins (PVMP).

The PNMP chronogram in RA patients had a wavy daily rhythm and was inverse in the healthy group. The meson level of PNMP in RA patients was increased 1.06-fold against the control group. The oscillation amplitude in the latter was 0.43, in patients with RA - 2.1. The chronogram of PVMP indices in RA patients was sinusoidal and inverted to the control group. The daily average values of PVMP in RA patients increased during the day at the expense of separate intervals by 26.3% -28.6%. The curve of KAP indicators in patients with RA and in the control group approached the shape of the sine wave. The KAP level fluctuated throughout the day, forming a single-phase rhythm in two groups. The average daily value in RA patients increased by 2.2-4.2 times during the day.

Thus, patients with RA have changes in daily rhythms of proteolysis, the depth of disturbances of which depended on the degree of activity of the process.

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THERAPEUTIC HYPOTHERMIA IN INTENSIVE CARDIOLOGY: DEFINITION, MECHANISMS OF ACTION, SAFETY AND TECHNICAL ASPECTS

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Therapeutic hypothermia (TH) can be defined as the process of actively lowering core body or target organ temperature in order to decrease its end injury in some acute conditions. TH is recommended in international Neurology guidelines as a method that reduces the risk of death and improves long-term neurological outcome in patients who suffer from hospital cardiac arrest.

Research interest in early interventions that may produce significant cardioprotective influence in case of acute myocardial injury, prevent downstream heart failure after it is maintained by the desire to reduce the economic, social and personal cost of complications of myocardial infarction. Structured literature review of data on TH application as adjuvant therapy in cardiology was the objective of the present paper.

TH is a treatment recommended by the guidelines of the American Heart Association on post-cardiac arrest management. Recommendations include achieving target temperature of 32-36 °C as and soon as possible and maintained over 24 h that is a highly effective strategy of heart protection from acute ischemia. Numerous animal experiments and human observation confirmed significant improvement of outcomes and survival rate after cardiac arrest and myocardial infarction. TH initiated after reperfusion following 60min of coronary artery occlusion substantially reduces the extent of no-reflow. Moreover, TH has been shown to decrease inflammation, reduce myocardial metabolism in parallel to oxygen demand, and promote heart epicardium flow. Mild hypothermia preserved myocardial conduction during ischemia by maintaining gap junction intracellular communication and Na⁺ channel function. As a result, reduction in the myocardial infarction size was observed in many studies (benefit from 8 to 38% between TH and control groups). Beyond infarction size reduction, TH-induced cardioprotection was associated with long-term improvement in terms of left ventricular remodelling and performance.

The process of TH was reported to be well tolerated in most studies without causing any evidence of significant hemodynamic compromise. Episodes of self-terminating ventricular fibrillation, or cases corrected by electrical cardioversion were reported. Other cardiac side effects included bradycardia, the QT interval prolongation.