



immune response to viral infection or allergen. It results in changes of cholinergic receptors sensitivity, dysregulation of beta-adrenoreceptors and increasing of bronchial sensitivity to constrictive influences.

Therefore prevention and appropriate treatment of atopy and acute respiratory infections, pathogenetic correction of broncholytic therapy in the mentioned category of patients are of an extremely importance.

The goal of the investigation was study of nebulizer administration of aminocaproic acid (ACA) effectiveness in patient with viral-induced bronchial asthma exacerbation.

The patients of the principal group (13 persons) were treated by basic medications used for therapy of BA exacerbation (broncholytics, systemic corticosteroids, mucolytics), and additionally received nebulizer inhalations of 2 ml 5% solution of ACA diluted by 0,9% solution of sodium chloride twice per day. Duration of treatment was 5 days. The compressor nebulizer was used. The patients of the comparison group (11 person) were treated only by basic complex without ACA.

Catarrhal symptoms (difficult nasal breathing, running nose, pharyngeal mucosa hyperemia) in addition to symptoms of BA exacerbations were observed in all the patients on admission to hospital. 14 patients were running 37,5°C temperature.

The dynamics of catarrhal symptoms regression was more pronounced in patients of the principal group: body temperature normalized on 2,4±0,8 days earlier, than in patients of the comparison group. Catarrhal symptoms significantly decreased by 1,7 ± 0,3 day before. Thereafter duration of BA exacerbation episode was shorter in patients of the principal group enabling to reduce the period of hospitalization on 2,4 days. Negative effects of ACA use were not observed.

Thereby, ACA nebulizer inhalation can be recommended to be use in a comprehensive treatment of patients with viral-induced BA exacerbation. The question of ACA administration feasibility to prevent seasonal viral diseases in patients with BA is perspective.

**Mandryk O.E.**

#### **INDICATORS OF THE LIVER DYNAMIC STATE IN PATIENTS WITH NON-ALCOHOLIC STEATOHEPATITIS, DEPENDING ON THE PRESENCE OF COMORBID BRONCHIAL ASTHMA AND OBESITY**

*Department of Internal Medicine, Clinical Pharmacology and Occupational Diseases  
Higher State Educational Establishment of Ukraine  
"Bukovinian State Medical University"*

In recent years the incidence of bronchial asthma (BA) and non-alcoholic steatohepatitis (NASH) is growing rapidly. Obesity has become epidemic as well. Quite often, timely diagnosis, efficient argumentation of treating the essential disease are complicated by the existing accompanying pathology that leads to the increased severity of its course, the formation of resistance to traditional treatments.

The aim of the investigation was to establish changes in the functional state of the liver in patients with NASH and obesity, depending on the presence of comorbid BA.

50 people aged from 30 to 50 years (average age - 42) were examined, 40% of them - men and 60% - women. Among them 30 patients with first-degree obesity (BMI over 30 kg/m<sup>2</sup>) were diagnosed with NASH, and in 20 other patients NASH was combined with first-degree obesity and persistent BA of medium severity. The duration of the disease ranged from 2 to 6 years. The control group consisted of 20 almost healthy individuals, according to their age and sex. The examination included general clinical blood and urine analysis, rapid response to syphilis, glycemic blood profile, chest X-ray, ECG, scatological study, biochemical tests of liver function and ultrasound of the abdomen.

In patients of the second group the decreasing De Ritis ratio was revealed (AST/ALT) to 28.2% (p<0.05) and in the first group to 23.4% (p<0.05) in comparison to the USO. The authentic increase of total bilirubin content in patients of the second group was found up to 2.2 times (p<0.05) in comparison with the first-group patients, whose bilirubin content increased by 1.5 times. The maximum authentic thymol test indices also related to the second group (p<0.05). The increased activity of alkaline phosphatase and γ-GT was found. It was 35.0% and 30.4% (p <0.05) in patients with NASH and BA together with obesity against 20.8% and 19.2% (p <0.05) in patients of the first group. The content of bile acids in the blood also increased by 2.3 and 1.9 times (p<0.05), indicating the presence of cholestasis, which was also observed in the second-group patients.

Thus, in patients with non-alcoholic steatohepatitis together with first-degree obesity and BA of moderate severity of a persistent course, the content of markers responsible for cytolysis activity of hepatocytes, cholestasis and mesenchymal inflammation are increasing. It indicates a powerful impact of asthma on the course of NASH.

**Mikulets L.V.**

#### **DAILY ARTERIAL PRESSURE MONITORING OF PATIENTS WITH RHEUMATOID ARTHRITIS**

*Department of Propedeutics of Internal Diseases  
Higher State Educational Establishment of Ukraine  
"Bukovinian State Medical University"*

Cardiovascular pathology causes about 40-50 % of deaths in patients with rheumatoid arthritis. The progression of inflammatory process in the perichondrial tissues and the endothelial tissue of blood vessels, or taking the medications such as non-steroidal anti-inflammatory drugs are the risk factors of cardiovascular diseases in these patients.



Objective of the study was to examine blood pressure characteristics by means of its daily monitoring in patients with rheumatoid arthritis.

There were 39 patients with the rheumatoid arthritis involved in the study. The diagnosis was verified according to ARA criteria (1987). The average age of the patients was  $35 \pm 9$  years old. The control group ( $n=10$ ) was represented by age and gender. In addition to routine methods the examination of patients included daily blood pressure monitoring. The examinations were carried out by means of the combined cardiomonitor "Cardiotechnique-4000AP", produced by "Inkart" (Russia).

The survey showed that only 20,5% of patients complained of blood pressure increase. But the method of daily monitoring of blood pressure proved that the daytime systolic blood pressure of patients with rheumatoid arthritis was almost the same as in the control group. The daytime systolic blood pressure of patients with rheumatoid arthritis was  $111,5 \pm 13,99$  mmHg and the same type of blood pressure in the control group was found  $110,5 \pm 4,95$  mmHg. When we tried to compare the daytime diastolic blood pressure and the daytime mean blood pressure, we saw that they were 1,2 and 1,1 times higher in patients with rheumatoid arthritis than in the control group of patients. Prevalence of "non-dipper" was revealed during structure analysis process. Arterial hypertension transformed in paradoxical night hypertension: "dipper" – 23,1%, "non-dipper" – 20,5%, "night-peaker" – 20,5% "over-dipper" – 5,1%.

It is recommended to carry out daily blood pressure monitoring for patients with rheumatoid arthritis because the results obtained are different from casual blood pressure measurement. In addition, a variability disorder between SAP and DAP and lack of normal blood pressure decrease at night are typical for patients with rheumatoid arthritis, therefore that it explains pain syndrome.

**Mikulets' L.V.**

### **RISK FACTORS AND SPREAD OF ARTERIAL HYPERTENSION IN PATIENTS WITH RHEUMATOID ARTHRITIS**

*Department of Propedeutics of Internal Diseases  
Higher State Educational Establishment of Ukraine  
"Bukovinian State Medical University"*

In the population of patients with rheumatoid arthritis (RA) arterial hypertension (AH) is one of the most spread risk factors associated with unfavorable prognosis concerning the development of cardio-vascular diseases. The mechanisms of development of AH in patients with RA are the combination of several factors both traditional risk factors of AH and characteristics of the underlying disease. Medical therapy of RA can be an additional factor provoking the development of AH in case of RA. Although, a relative contribution of these factors into the development of AH in patients with RA has not been detected exactly.

The objective of our study was to examine the spread and risk factors in patients with rheumatoid arthritis.

114 patients with RA hospitalized at the Rheumatological Department of the Municipal Clinical Hospital № 3 without accompanying cardiovascular diseases during 2014-2016 have been examined. The study was performed according to the main regulations of GCP ICH and Helsinki Declaration on biomedical investigations. The diagnosis of RA was verified according to the criteria suggested by ARA (1987), the Order of the Ministry of Public Health of Ukraine № 676, dated 12.10.2006. The average age of the patients was  $43,3 \pm 9,3$ . Duration of the disease ranged from 6 months to 12 years. Women dominated among the examined patients – 90 (79,0%), the majority of the individuals were serum positive by rheumatoid factor – 72 (63,2%). Practically all the patients had a polyarthritis form of the disease – 108 (94,7%). Exclusive criteria were: diabetes mellitus, clinical conditions associated with atherosclerosis, severe comorbid pathology of the internal organs. The mean value of the examined patients by DAS28 was  $4,37 \pm 0,8$ , HAQ –  $1,32 \pm 0,5$ . The patients with RA received basic therapy (methotrexate in the dose of 7,5-15 mg/week, non-steroidal anti-inflammatory drugs (NSAIDs)). During clinical examination of the patients the availability of the following factors was found: smoking, obesity, family history of cardiovascular diseases. In addition to generally expected measurements, all the patients underwent measurement of their height, body weight, waist circumference, body mass index (BMI), DAS28, and HAQ were calculated.

AH was found in 61 (53,5%) patients with RA. In the group of patients afflicted with RA and with AH the value of the systolic blood pressure (SBP) was in an average  $146,7 \pm 16,4$  mm Mercury, diastolic blood pressure (DBP) was  $93,4 \pm 9,8$  mm Mercury. In the group of patients afflicted with RA without AH these values were  $115,4 \pm 12,3$  mm Mercury and  $77,5 \pm 6,7$  mm Mercury respectively. The duration of AH in the general group of patients was in an average  $4,37 \pm 3,14$  years. In 39 (34,2%) patients elevated BP was first found before RA onset, and in 75 (65,8%) patients – after it. Comparing the groups of patients afflicted with RA with AH and without it we have found the following: the patients with RA and AH were older ( $p < 0,05$ ), and seropositive RA prevailed ( $p < 0,05$ ). Analysis of the spread of cardiovascular risk factors among patients with RA revealed that in the group of patients with RA and AH BMI was higher ( $26,3 \pm 2,7$ ) than that of the patients with RA and without AH ( $23,3 \pm 1,7$ ). Their waist circumference was  $86,3 \pm 10,7$  cm and  $78,9 \pm 7,8$  cm respectively. Reliable differences concerning such risk factors as smoking, compromised family anamnesis, lipidogram values were not found.

In patients with rheumatoid arthritis, especially in case of its early form, a wide spread of AH was detected. In the majority of patients the disease developed against the ground of RA and was associated with traditional risk factors, rheumatoid factor (RF) available, duration of intake of NSAIDs and glucocorticoids. The evidence obtained is indicative of the necessity of early diagnostics and effective therapy of AH with RA.