



metformin led to a significant regression 15% HbA1 - "diabetes mirror" and 17% BMI ( $p < 0.05$ ). At the same time the correction of the previously mentioned risk factors of arterial hypertension resulted in more significant decrease of arterial blood pressure level and doses of the base-line preparations in the main group.

Thus, it is expedient to prescribe small doses of metformin, which improves glucose tolerance, helps to normalize body weight and optimizes standard antihypertensive therapy to the patients with arterial hypertension against a background of latent and mild diabetes mellitus and increased body weight.

**Dudka I.V.**

### **DEVELOPMENT OF GASTROESOPHAGEAL REFLUX IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE: THE ROLE OF HEMOSTASIS SYSTEM**

*Department of Internal Medicine, Clinical Pharmacology and Occupational Diseases  
Higher state educational establishment of Ukraine  
«Bukovinian State Medical University»*

Gastroesophageal reflux disease (GERD) and chronic obstructive pulmonary disease (COPD) are common pathological conditions that occur combined in 25-60% of cases. Patients with GERD often have lung «masks» – cough, nocturnal dyspnea, bronchial hyperreactivity, bronchospasm and laryngospasm. Symptoms of GERD in 4-10% of the population are observed every day, in 20-30% every week and in 50% every month. In COPD, due to hypoxia, accumulation of free radicals in the systemic circulation that promote the release of biologically active substances, an increase of overall blood coagulation capacity is observed, which is compensated by an increased activity of non-enzymatic fibrinolytic activity (NEFA). Objective of the investigation was to find the probable mechanisms of progression of GERD on the background of COPD by studying the various stages of blood coagulation. To achieve this aim the study involved 32 patients with COPD, the group B, (GOLD 2), including: 8 – without comorbidity (1st group), 8 – with accompanying endoscopically negative (EN) GERD (2nd group), 8 – with accompanying endoscopically positive non-erosive (EPN) GERD (3rd group), 8 – with accompanying endoscopically positive erosive (EPE) GERD (4th group). The control group consisted of 10 practically healthy persons (PHP) of the corresponding age and sex.

The analysis of results of studying the 2nd phase of coagulation hemostasis showed that PTT was significantly reduced in all observation groups. The maximum similar decline in the indices was observed in patients of groups 3 and 4 – by 39.5% compared to the index in the PHP ( $p < 0.05$ ) in the absence of intergroup differences; in patients of group 1 PTT decreased by 19.5% compared with those in PHP; and in patients of group 2 there was a decrease of PTT by 30.9% ( $p < 0.05$ ). Studying the 3rd phase of coagulation hemostasis considering the content of fibrinogen in the blood suggests that in patients of all observation groups this figure was significantly reduced: in patients of the 1st group – by 11.0%, group 2 – by 17.5%, groups 3 and 4 – by 26.6% ( $r_{1-4} < 0.05$ ). While analyzing the blood anticoagulant potential we found a reduction in TT in all groups of patients with the highest percentage of decline in the patients of group 4 – by 37.6% ( $p < 0.05$ ) compared with group of PHP, but in the patients of group 1 TT decreased reliably by 21.8% too, in group 2 by 28.2% and in the 3rd group by 31.2% ( $r_{1-4} < 0.05$ ) with the reliable difference between groups 1, 2, 3 and group 4. AT III activity in the patients of group 4 was reduced relative to the standards by 27.1%, that is, it had the minimum value, while the patients of group 1 showed a decrease in the activity of AT III by 16.4%, group 2 – by 22.3% and group 3 by 24.9% ( $r_{1-4} < 0.05$ ) with the absence of intergroup differences. Analysis of the blood fibrinolytic activity showed that the TFA of plasma in patients of all groups is reliably lower than the benchmarks: in group 1 by 13.5%, group 2 by 12.4%, group 3 by 17.6% and in the 4th group by 19.4% ( $r_{1-4} < 0.05$ ) with the presence of reliable intergroup difference ( $p < 0.05$ ). The findings of the study of coagulation hemostatic factors, anticoagulant and fibrinolytic systems in patients with COPD accompanied by GERD indicate the development of hypercoagulation syndrome, which deepens with increasing severity of GERD. Thus, reliable factors of occurrence and progression of endoscopically positive GERD in patients with COPD are reduced activity of antithrombin III below 70%; reduced enzyme fibrinolytic activity by more than 45% from the proper ones; reduced activity of Hageman dependent fibrinolysis by more than 55% from the proper ones. Plasma hypercoagulation (activation of the 2nd and 3rd phases), reduced anticoagulant potential of blood (of antithrombin III, XIII factor) inhibition of total fibrinolytic activity of plasma due to inhibition of enzymatic, Hagemann-dependent fibrinolysis, a compensatory increase in the activity of non-enzymatic fibrinolysis, the growth of proteolytic activity of plasma that deepens with increasing severity of bronchial obstruction syndrome ( $FEV_1$ ), promote the development of positive endoscopic erosive GERD.

**Dudka T.V.**

### **CHOLINERGIC DISBALANCE IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND CHRONIC ACALCULOUS CHOLECYSTITIS**

*Department of Internal Medicine, Clinical Pharmacology and Occupational Diseases  
Higher state educational establishment of Ukraine  
«Bukovinian State Medical University»*

Chronic obstructive pulmonary disease is one of the most spread diseases affecting people of all ages. Combination of chronic obstructive pulmonary disease with gastro-intestinal pathology is one of the most frequent polymorbidity. There are different evidences indicating a combined course of COPD with gastro-intestinal diseases in 8-50% of cases. The combination of chronic cholecystitis, chronic bronchitis and other bronchial obstructive diseases appears to be found in more than 20-25% of individuals.



Studies of bronchial cholinergic tone regulation and that of the gallbladder in patients with combined course of chronic acalculous cholecystitis (CAC) and chronic obstructive pulmonary disease (COPD) are especially topical.

92 patients were involved in the study: 30 patients with COPD (1st group), 30 patients with COPD and comorbid CAC in the acute phase (2nd group), 32 patients with CAC in the acute phase (3rd group) and a control group – 30 practically healthy individuals (PHI) of the respective age.

All the patients with COPD and COPD combined with CAC had a marked predominance of the parasympathetic nervous system, as evidenced by the established reliable decrease of the activity of the blood acetylcholinesterase in patients with isolated COPD by 1.4 times ( $p < 0,05$ ), in patients with COPD combined with CAC – there was more intense inhibition of enzyme activity – by 1,8 times ( $p < 0,05$ ) and in patients with CAC of the 3-rd group there were identical changes – a decreased activity of the blood acetylcholinesterase by 1,6 times ( $p < 0,05$ ) with reliable intergroup difference between the groups ( $p < 0,05$ ).

The indicator that contributes to the development and progression of chronic obstructive pulmonary disease with concomitant chronic acalculous cholecystitis is the presence of a pronounced cholinergic imbalance, one of the manifestations of which is a significant reduction in the activity of the blood acetylcholinesterase.

**Garazdiuk O.I., Garazdiuk I.V., Datsiuk L.G.**

### **MONOTHERAPY WITH ANGIOTENSIN-CONVERTING ENZYME INHIBITORS AND COMBINED ANTIHYPERTENSIVE THERAPY IN PATIENTS WITH DIABETIC NEPHROPATHY: RETROSPECTIVE STUDY**

*Department of Internal Medicine and infectious diseases  
Higher State Educational Establishment of Ukraine  
«Bukovinian State Medical University»*

Diabetes and hypertension affect heart, kidneys, brain and blood vessels of the retina. End-stage renal disease with a combination of these pathologies is the commonest cause of disability and mortality.

The aim was to compare the efficiency of monotherapy with ACE inhibitors at high doses and combination therapy (ACE inhibitor and moxonidine or ACE inhibitor and indapamide) in patients with hypertension on the background of diabetic nephropathy.

We analyzed 68 clinical records and 34 blood pressure diaries. The first group of patients is represented by 16 patients who received only ACE inhibitor (enalapril or lisinopril) at a dose of 20-60 mg/day, the second group includes 27 patients treated with the combination of enalapril or lisinopril (10-20 mg/day) with moxonidine (3-4 mg/day), the third group is represented by 25 patients treated with the combination of ACE inhibitors (as in the second group) and indapamide at a dose of 1.5 mg/day.

The more significant effect was proved in the second group (blood pressure after treatment was  $130 \pm 4$  (systolic) and  $85 \pm 3$  mm Hg (diastolic) vs.  $136 \pm 4$  and  $88 \pm 2$  in the first group and  $133 \pm 3$  and  $80 \pm 2$  in the third group ( $P < 0,05$ ), respectively, and we found out a positive effect in the second group on the heart rate ( $70 \pm 3$  beats/min in the second group vs  $80 \pm 6$  in the first group and  $83 \pm 4$  beats/minute in the third group ( $P < 0,05$ )), which positively changed quality of patients' life. The use of combined therapy with ACE inhibitors and moxonidine in patients with diabetic nephropathy demonstrates higher clinical efficiency and a favorable safety profile.

**Glubochenko O.V.**

### **ANCYLOSING SPONDYLOARTHRITIS AND ASSOCIATED COMORBIDITY**

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

Ankylosing spondyloarthritis (AS) is a chronic inflammatory rheumatic disease affecting primarily the axial skeleton and the sacroiliac joints. AS can be associated with peripheral joint involvement and may also be accompanied by the presence of extra-articular manifestations. AS is associated with comorbidities, accompanying pathologic process, and adds the complexity to the management and strategies of treatment. Understanding of these comorbidity profiles will help to evaluate the impact of comorbid conditions on AS clinical course.

We have evaluated comorbidity and its association with clinical parameters in 22 patients with AS (17 men and 5 women). Diagnosis of AS was based on *Modified New York Criteria*. Disease activity was estimated by Ankylosing Spondylitis Disease Activity Score (ASDAS), functional status by Bath Ankylosing Spondylitis Functional Index (BASFI) and spinal mobility by Bath Ankylosing Spondylitis Metrology Index (BASMI).

The survey of the results demonstrated that comorbidities were detected in 19 (86.4%) patients. Cardiovascular disorders (ischemic heart diseases, hypertonic diseases, heart insufficiency), gastrointestinal diseases (chronic gastroduodenitis, peptic ulcer, bowel irritations disorders), hepatobiliary diseases (chronic persistent hepatitis, noncalculous cholecystitis, chronic pancreatitis), lung problems (chronic bronchitis) prevailed in comorbidity profile. Diabetes mellitus (2 patients), osteoporosis (3 patients), anemia of chronic diseases (3 patients), kidney disorders (nephrolithiasis) – 1 patient were diagnosed in patients. The number of comorbid diseases in the age group up to 40 years was within 2-4, 40-50 years - 5-6 diseases.

Patients with comorbidities had significantly higher scores in ASDAS, BASMI, BASFI. The frequency of comorbidities was higher in the patients with peripheral joints involvement and associated with more active disease and functional impairments, depending from age, duration of disease. The growth of comorbidity caused a more severe and