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**CLINICAL, FUNCTIONAL AND NEUROHORMONAL ASPECTS TO IMPLEMENT THE
CONCEPT TO PREVENT SUBCLINICAL ATHEROSCLEROSIS IN A SHORT-TERM AND LONG-TERM**

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The question to determine subclinical atherosclerosis in the XXI century is somewhat disputable because the term " atherosclerosis ," some authors state, is misunderstandable including various variants of arteriosclerosis , each of them is not only characterized by structural features, but also pecific causes and mechanisms of occurrence. At a young age lipid-free intimal lesions of the arteries are formed with muscular-fibrous, fibrous hyalinized plaques, circular or focal muscle-elastic intimal hyperplasia - and therefore the question of screening and treatment of these patients is important. This definition makes it worthwhile to find modern transformation definitions of ischemic heart disease, and therefore a comparison of clinical and pathophysiological paradigm of subclinical atherosclerosis concerning the effectiveness of treatment is important.

To estimate prevention of subclinical atherosclerosis in a short-term (3 months) and long-term (1 year) prognosis by the functional and neurohormonal markers of atherogenesis .

The research is conducted on 164 patients who were admitted with bias diagnosis of cardialgia in the distribution of vegetative-vascular dystonia, coronary X syndrome, stable exertional angina pectoris of I-II functional classes. The following diagnostic methods in a short-term (3 months) and long-term (1 year) periodswere used: electrocardiography, echocardiography, extracranial duplex ultrasound scanning of the common , external and internal carotid arteries, stress-tests (tredmil test), the methods to examine the blood indices including general blood count, biochemical test, blood lipid level of homeostasis, neuromessenger vasoactive indicators (Pregnancy-associated plasma protein-A (PAPP-A)) and C -reactive protein (CRP).

In the absence of initial differences in PAPP-A and CRP in groups 1 and 2 at the beginning of examination and during treatment there is a significant decrease in PAPP-A in group 1 ($p < 0,001$) and group 2 ($p < 0,001$) against the ground of treatment, and PSA group 1 ($p < 0,001$) and in group 2 ($p < 0,001$), and increase and decrease of an average IMC through 6 vessels to the value of 0.9 mm at the beginning of testing is characterized by the odds ratio (OR) 4.15 , with the decrease in growth rate of PAPP- A 10-20% - OR 0.56 , CRP in groups 1 and 2 - OR 0.57.

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CHRONIC HEART FAILURE (PATHOGENETIC ASPECTS)

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Endothelial dysfunction is a characteristic feature of chronic heart failure (CHF), regardless of etiology, and one of the factors of systemic vasoconstriction and increased risk of thrombosis in case of this syndrome. The objective was to evaluate the impact of different modes of diuretic therapy on vascular endothelial function in patients with chronic heart failure during 6 months of treatment.

108 patients were examined (63 men and 45 women, age 56-82 years (average - $(68,1 \pm 0,9)$ years)) with stage III hypertension with coronary heart disease (CHD) and without it, CHF II-III NYHA functional class and ejection fraction $< 45\%$. All the patients included in the study were decompensated, requiring Loop diuretics and had no contraindications to their administration of term monitoring the patients was 6 months after inclusion in the study. All patients had the correction in treatment according to current treatment protocols of hypertension complicated by heart failure, with the obligatory presence of coronary artery disease and diabetes. Depending on the nature of diuretic therapy all examined patients with CHF were divided into 2 groups. Group 1 ($n = 55$) included patients who were assigned daily to diuretic therapy torasemide, group 2 ($n = 53$) - patients who were administered to furosemide therapy (drug intake 1-2 days or 2-3 consecutive days followed by a break for 1-2 days). Changes in the diameter of the brachial artery were evaluated using the diagnostic ultrasound scanner "LOGIQ 500", 7 MHz linear transducer of ultrasonic phased grid system. Echo-location of the brachial artery was performed in longitudinal section of 10-15 cm above the right elbow. The study was conducted in triplex mode (B-mode, color Doppler flow mapping, spectral analysis of the Doppler frequency shift). Endothelial function, defined as endothelium-dependent vasodilation (EDV), was assessed as the percentage increase in the diameter of blood vessels - from the source to the maximum during hyperemia.

In patients with CHF EDV was improving significantly under various schemes of diuretic therapy after 3 months of follow-up ($p < 0.0001$ as compared to the original index, calculated by Wilcoxon criterion). In patients who received furosemide EDV change of -3.5% before treatment to $+ 1.7\%$ in 3 months ($p < 0.0001$) and $+ 5.4\%$ after 6 months ($p < 0.0001$) . In patients with heart failure end their treatment regimen which included daily intake of torasemide, EDV changed from -3.8% before treatment to 3.1% after 3 months ($p < 0.0001$) and $+ 7.1\%$ after 6 months ($p < 0.0001$). After 6 months EDV in selected groups of patients under the influence of intermittent therapy with furosemide increased by 63.1%, while daily intake torasemide- by 97.9% ($p = 0.036$ between groups of comparison using Mann-Whitney). The study demonstrated that in patients with CHF the magnitude in changes of blood flow velocity in the brachial artery after 3 months of standard therapy with intermittent receiving furosemide increased by 6.2%, and the intake of torasemide - by 17.1% ($p = 0.026$); after 6 months of using the scheme with furosemide - increased by 22.5%, and with intake of torasemide - by 33.9% ($p=0.033$). With daily administration of torasemide, due



to statistically significant improvement of vascular endothelial function effective correction of neurohumoral component in patients with decompensated heart failure occurred. Improved peripheral vasomotor reactions and functional state of the endothelium is an important component of torasemide impact in patients with CHF.

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BETA-2-MICROGLOBULIN AS DIAGNOSTIC MARKER OF RENAL LESIONS IN RHEUMATOID ARTHRITIS

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Over the last years a growth of the renal morbidity has been observed in patients with rheumatoid arthritis (RA), a need of elaborating approaches to an early diagnosis of these abnormalities has arisen. The object of our research was detecting renal complications in patients with rheumatoid arthritis at early stages. The blood and urinary level of β 2-microglobulin was evaluated for this purpose.

The authors examined 28 patients with rheumatoid arthritis of a diverse duration of the disease. The control group consisted of 10 apparently healthy persons. The gender distribution: 11 persons were men and 17 - women. The age of the subjects ranged from 34 to 62 years (the average age is 48 years). β 2-microglobulin in the blood and urine was determined by means of the method of the immune-enzyme analysis.

An raised level of the blood serum level was revealed in 17 patients among those examined, 9 of them manifesting its presence in urine. An elevation of β 2-microglobulin based on bibliographical findings points to a lesion of the renal interstitial tissue. As a result of further thorough examination of these patients we revealed glomerulonephritis in 8 patients (28,6 %), interstitial nephritis – in 3 subjects (10,7 %), amyloidosis in 3 persons (10,7 %). Primary renal dysfunctions were detected in 3 persons (10,7%). While carrying out conventional research methods, renal pathology could be verified only in 9 patients with RA with a prolonged antecedent anamnesis. No dependence of the β 2-microglobulin level on the age and gender was revealed.

Carrying out the above-mentioned studies in patients with RA will make it possible to improve an early detection of terrible affections on the part of the kidneys that will contribute to raising the efficacy of treating patients and prolonging their life span.

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EFFICACY OF SOME HERBAL DRUGS ADMINISTRATION FOR PATIENTS WITH UROLITHIASIS

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Objective of the research was to improve the results of an integrated treatment of urolithiasis patients administering phytopreparation "Uronephron" («Фармак», Ukraine).

The examination involved 25 patients with ultrasound symptoms of uratic diathesis or urinary-stone disease. The age of patients ranged from 37 to 72, with disease duration from 15 to 37 years. All patients were treated with the preparation "Uronephron"(phytoextract liquid *Allium Cera L.*, *Rhizoma Agropyri*, *Betulae folium*, *Foenugraeci semen*, *Radix Petroselini*, *Solidaginis herba*, *Equiseti herba*, *Polygoni avicularis herba*, *Radix Levistici*): 30 drops 3 times a day for 1 month.

All the patients were observed to have frequent urination (quantitatively and qualitatively), clouding of urine, as well as moderate acceleration of pain syndrome regress. Beginning with the 7-10 day the frequency of urination was close to normal, the patients noted the increase of urine transparency with episodes of turbidity, and reduced discomfort in the loin. It was important that the symptoms related to cholecysto-hepatopathy, syndrome of bowel irritation became regressive as well. After 2 weeks of "Uronephron" intake, all the patients noticed a significant reduction (80% of all patients) or complete absence (20% of all patients) of subjective clinical manifestations of urine acid diathesis. Moreover, it was accompanied by a positive dynamics of urinary sediment changes. These facts can be explained by the presence of active components of "Uronephron": lovage root extract, centaury herb, rosemary leaves. Their combined effect causes diuretic, lytolic, spasmolytic, vasodilatory, anti-inflammatory, antiseptic, antioxidant and general strengthening actions. Safety and tolerance of "Uronephron" was considered to excellent or good for all the patients.

"Uronephron" is a complementary treatment for patients with urolithiasis, a valuable herbal remedy, which affects renal manifestations of the disease and reduces symptoms, which frequently occurs in these patients, connected with lesions of the digestive system.

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NEBULISER THERAPY FOR PREVENTION AND TREATMENT OF VIRAL-INDUCED BRONCHIAL ASTHMA EXACERBATION

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The prevention of infection-dependent exacerbation of bronchial asthma (BA) is not fully solved task. Immunosuppression develops in patient with specified variant of BA, which is characterized by changed or distorted