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## USING OF UROANTISEPTICS OF HERBAL ORIGIN AS A MEANS OF ADJUVANT THERAPY IN PATIENTS WITH GOUT

## ЗАСТОСУВАННЯ УРОАНТИСЕПТИКІВ РОСЛИННОГО ПОХОДЖЕННЯ В ЯКОСТІ ЗАСОБІВ АД'ЮВАНТНОЇ ТЕРАПІЇ У ХВОРИХ НА ПОДАГРУ

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**Summary.** Modern trends in medical therapy of gout require the inclusion in the complex treatment of drugs that have a multifaceted spectrum of corrective properties, characterized by mildness, gradual action and have minimal side effects. Such requirements correspond to preparations of plant origin. The features of the therapeutic action of the combined plant uroantiseptic drug "Uronephron" in the complex treatment of patients with gout have been studied. It was found that inclusion in the regimens of the treatment of gout "Uronephron" favorably affects the articular, renal manifestations of the disease, reduces the level of hyperuricemia, reduces the frequent symptoms in patients with gout disease of the digestive system. Positive effect of treatment of patients with gout is due to diuretic, litholytic, antispasmodic, anti-inflammatory, antibacterial, antioxidant and general strengthening effect of the drug "Uronephron".

**Keywords:** uroantiseptics, «Uronephron», gout, polymorbidity, treatment.

**Резюме:** Сучасні тенденції медикаментозної терапії подагри вимагають включення в комплексне лікування лікарських засобів, які мають багатогранний спектр корегувальних властивостей, характеризуються м'якістю, поступовістю дії та володіють мінімальними побічними впливами. Таким вимогам відповідають препарати рослинного походження. Досліджені особливості терапевтичної дії комбінованого рослинного уроантисептичного препарату «Уронефрон» в

комплексному лікуванні хворих на подагру. Було встановлено, що включення в схеми лікування подагри «Уронефрону» сприятливо впливає на суглобові, ниркові прояви хвороби, знижує рівень гіперурикемії, зменшує симптоматику частих у пацієнтів із подагрою уражень системи травлення. Позитивний ефект лікування хворих на подагру зумовлений діуретичною, літолітичною, спазмолітичною, протизапальною, антибактеріальною, антиоксидантною та загально зміцнювальною дією препарату «Уронефрон».

**Ключові слова:** уроантисептики, «Уронефрон», подагра, поліморбідність, лікування.

Introduction. Over the past decade the prevalence of gout has increased significantly, due both to an increase in alcohol, foods rich in purines, and higher levels of diagnosis [4, p. 4-6]. A large proportion of the growth in the incidence of gout belongs uncontrolled taking of medications that induce the development of gout: diuretics, methylxanthine, Riboxinum, adenosine triphosphate (ATP), even low doses of aspirin. In recent years proved that some widely used food additives like MSG, in foods provoke breach of purine metabolism and promote the development of gout. Significant disability due to these nosology and economic costs of their treatment determine the relevance of studying of combined pathology [1, p.4-5; 5, p.16].

Significant difficulties in the treatment of gout are often caused by late detection and its almost natural premonitory background that significantly obstruct realization of long-term (lifetime) use of a main medication of allopurinol [6, p.111-116]. Modern trends in medical therapy, especially in cases of mixed pathology demanding, need inclusion in treatment medications that have versatile range of corrective properties, and are characterized by soft, gradual steps don't have or have minimal side effects. Such requirements correspond to medicaments of herbal origin [2, p.32-34; 3, p.258-262].

The goal of the study was to investigate the characteristics of the therapeutic effects of combined plant uroantiseptic medicament "Uronephron" which includes liquid extract obtained by extraction of 45% ethanol with onion skin, Goldenrod herb, the roots of lovage, birch leaves, grasses, horsetail, roots of couch grass, seeds of fenugreek, parsley root, in the complex treatment of patients with gout [7, 632].

Material and methods. The research was conducted during the year in the rheumatological department of the city hospital №3 in Chernivtsi. 25 patients with chronic gout were inquiring during the exacerbation. The diagnosis of gout was put according to Wallace's criteria and co-authors and recommendations of Ukrainian Association of Rheumatology and MOH Ukraine number 676 of 12.10.2006r. From section 13 "Rheumatology". The diagnosis of gout based on complaints, carefully assembled medical history, physical examination results, X-ray data, ultrasonography examination parameters and biochemical studies of blood, urine. X-ray examinations of affected joints were done by standard methods. In all patients were noticed ultrasonic signs of uric acid diathesis or urinary-stone disease. All patients were male, in age from 37 to 72 years with duration of history of the disease from 5 to 17 years.

All patients received standard basic therapy in acute period, patients received according to the Protocol MOH Ukraine number 675 of chapter 13 "Rheumatology" in 2010, namely primarily NSAIDs (Nimesulidum or Movalis), local compresses of Dimethoxide with a solution of NSAIDs or ointment "Remisid" and since improved - from 10-12 day was used allopurinol in low (100 mg / day) doses, gradually increasing to 300 mg / day by the end of the third week and transferred to outpatient treatment allopurinol (comparison group). 15 patients (study group) - additionally were designated "Uronephron" 1 teaspoon 3-4 times a day during 1 month. Criteria of efficiency: clinical, laboratory and biochemical (blood, urine - the dynamics of uric acid and urinary sediment).

Research results. The results of the treatment of patients with gout in the main group were respectively better than the comparison group.

Observations have found that at a stationary stage of treatment in patients of group 2-3 days started earlier and was accelerated regression of a painful joint syndrome, allowing a 7-8 day to reduce at half the daily dose of NSAIDs and in 1-2 days earlier it cancels.

It should be noted that there is a direct effect of "Uronephron" on any manifestations of gastro- or cholecystopancreatopathy: at the time of discharge from the hospital, special complaints from these systems did not show patients. This situation allowed after the 20th day of application to cancel in 12 patients proton pump-inhibitors, and in others - to go on a single dose administration in a day. Also, the effect of these agents on the clinical manifestations of osteoarthritis was noticeable in the form of a decrease in articular pain syndrome and crunch in the affected joints.

Determined that in patients of the main group was noticed increased frequency urination (quantitatively and qualitatively), turbidity of urine excretion of uric acid. From day 7-10 frequency of urinary close to normal, patients noted a rise of transparency urine with episodes of its turbidity, reducing discomfort in the back. It is important symptoms of accompanying cholecystohepatopathy, irritation bowel syndrome has a tendency to regression clearer than in the comparison group of patients.

According to ultrasound data, before constipation of the kidneys, convincing evidence of kidney stones was detected in 20.0% patients, and in 71.43% - marked diarrheal urinary events, were 34, 28% - cortical-medullary differentiation was found to be a possible proof of interstitial lesion of kidney parenchyma. No pathological changes were detected in only 3 patients with the first diagnosis and under 42 years of age. After 2 weeks of use "Uronephron" the probable changes in the ultrasound examination were not detected.

After 2 weeks of use "Uronephron" dynamics of reducing uric acid in the blood was better than in the comparison group, but the difference was not probable. In patients in both research groups until the end of inpatient treatment was probable to improve parameters: white blood cells, erythrocyte sedimentation rate, C-reactive protein, however differences, between groups were not found. These phenomena can be explained by factors components "Uronephron": extracts of couch grass roots, lovage, parsley, Goldenrod herb, horsetail, sinapism, seeds of fenugreek, onion peel, birch leaves. Their combined effect makes diuretic, antispasmodic, anti-inflammatory, antibacterial, antioxidant and general firming action [8, p.533]. It was important also detecting the probable reduction in creatinine blood on the 20th day by using "Uronephron" that may be probable evidence by improve him kidney function.

We researched the concentration in the blood of the reaction products uric acid content of glutathione in the blood, activity of catalase, glutathione peroxidase. As a result of research discovered a significant increase in the concentration of reduced glutathione during treatment in patients who additionally received "Uronephron". They had contents of reduced glutathione after treatment higher by 26,1% ( $p < 0,05$ ) in compare with contents before treatment. The trend to reduced activity of glutathione peroxidase observed during treatment in both groups of patients, but it was not credible. Blood catalase activity significantly increased after treatment in patients who took "Uronephron" on average



by 20,4% ( $p < 0,05$ ) in compare with that before treatment, in patients of the group of compare – by 13,8% ( $p < 0,05$ ). After treatment we could see decrease of concentration of reaction products of uric acid in patients of both group, more reduction of their content noted in patients, whom to complex treatment was included "Uronefron".

In patients who took "Uronefron", excretion of uric acid was increased by the kidneys. The concentration of uric acid in urine increased by 29,6%, with a maximum value of 2.00 and 14.00. Standard treatment led to a decrease in urinary acid excretion by the kidneys by only 7.9%, and the daily rhythm was characterized by maximum values at 10.00 and at 14.00.

Particularly important were significantly lower activity of alanine aminotransferase, aspartate aminotransferase, lactate dehydrogenase, alkaline phosphatase, gammaglutamyltransferase and of total bilirubin in patients of the main group, which is strong evidence of its inherent hepatoprotective properties. Noteworthy is reduction, though not probable, on the 20th day of treatment, levels of cholesterol, triglycerides and

blood glucose, which give reason to investigate the cholesterol-lowering and hypoglycemic effects "Uronefron" in the longer their application.

Some (False) positive changes in calcium and phosphorus levels in serum may indicate a favorable effect "Uronefron" in the calcium-phosphorus metabolism, which is important in the study of patients due to the fact that with age by them develop osteoarthritis, osteoporosis.

Cannot stay out of our attention, improving of iron in the blood serum, in patients of the main group: it probably grew (although within the reference values of normal), while patients in the comparison even decreased, which may have the result of the negative impact nonsteroidal anti-inflammatory medicaments and of allopurinol.

Interestingly, blood glucose levels are more significant than in the comparison group. Although this decrease compared to baseline was unlikely, it is possible that hypoglycemic properties may be detected in longer-term use of "Uronefron".

All patients rated tolerability of "Uronefron" as excellent and good.

#### Conclusions :

1. Herbal complex uroantiseptic medicament "Uronefron" is a valuable adjuvant tool in the treatment of patients with gout and has positive effect on joints, the renal manifestations of the disease, reduces the level of hyperuricimiy. Also, the effect of these "Uronefron" on the clinical manifestations of osteoarthritis was noticeable in the form of a decrease in articular pain syndrome and crunch in the affected joints.
2. Using of "Uronefron" reduces symptoms in patients with frequent gout lesions of the digestive system, Since the drug has hepatoprotective and hypocholesterolemic properties.
3. The "Uronefron" positive changes in the calcium-phosphorus metabolism, which is very important for older patients who suffer from osteoarthritis and osteoporosis.
4. The positive effect of the treatment of gout are caused by diuretic, spasmolytic, anti-inflammatory, antibacterial, antioxidant and general strengthening effect of the medicament "Uronefron."

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