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## **THE PROSPECTS OF STUDYING THE CHEMICAL COMPOSITION OF COMMON SOAPWORT**

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Since ancient times plants have been used in the treatment of various ailments. Sorcerers knew about the presence of certain medicinal properties of stems due to their composition of active substances that influenced not only on one organ or symptom but on the whole organism.

Many medicinal plants remain poorly understood. These include a representative of the carnation family - common soapwort or soapweed, which has long been used in folk medicine for diseases of the gastrointestinal tract, upper respiratory tract, and externally for rheumatism and skin problems.

The aim of the study was to investigate the chemical composition of common soapwort, including the content of free and common amino acids in the stems of this plant.

The study of the qualitative composition and quantitative content of amino acids was determined by HPLC on an Agilent 1200 chromatograph (Agilent technologies, USA).

Common soapwort is beneficial for humans and animals, it is easily accessible to everyone because it grows in the nature around us, it is not a poisonous plant. Common soapwort is used as an ornamental plant on flower beds in mixed cultures, and to decorate the house with the bouquets.

According to the literature common soapwort contains steroid and triterpene saponins, flavonoids, ascorbic acid, we investigated 12 elements in the stems of common soapwort - 4 macro (K, Ca, Mg, Na) and 8 trace elements (Fe, Zn, Mn, Cu, Ni, Cr, Si, Se), in the subterraneous organs - 11 elements - 4 macro- and 7 trace elements. Silicium was not found in the underground organs.

The stem of common soapwort also contains such an important macroelement as magnesium, which, according to sources, is involved in regulating energy and plastic reactions, helps to strengthen the cardiovascular system, prevents ischemia and angina. Magnesium has a calming effect and normalizes sleep. The stem also contains selenium, which helps to strengthen immunity in humans.

In the study of free and common amino acids, eight essential and six substitutable amino acids were found in the stems of common soapwort.

The dominant amino acids in common soapwort are found to be L-Proline (12.9 µg/mg), L-Arginine (15.61 µg/mg), L-Tyrosine (9.37 µg/mg).

At present, phytopreparations of common soapwort enhance the excretory functions of the mucous membranes of the higher respiratory tract, are part of expectorants, and also show diaphoretic and choleric actions. The study of new substances in medicinal plant raw materials will allow expanding the range of its application in medical practice.

Therefore, the results obtained confirm the prospects for further research of common soapwort and the establishment of new possible pharmacological properties.

**Matushchak M.R.**

## **ECONOMIC ANALYSIS OF THE CONDITION OF PHARMACEUTICAL PROVISION OF PATIENTS WITH GASTROESOPHAGEAL REFLEX DISEASE**

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Heartburn is one of the main symptoms of gastrointestinal diseases and poses the risk of developing various esophageal lesions. It is estimated that approximately 10% of adults and almost 50% of pregnant women experience heartburn - the main symptom of gastroesophageal reflux disease (GERD) - daily, 30% - at least once a week, 60% - at least once a month. The number of people suffering from heartburn ranges from 30 to 60% of the population, which is equally common



in men and women and is associated with poor quality of life. Therefore, the study of this problem in the framework of treatment and prevention remains relevant in modern gastroenterology.

The aim of the work was to improve the quality of pharmacotherapy of patients with GERD by conducting a pharmacoeconomic analysis of the use of proton pump inhibitors and propulsive agents with the improvement of the order of formation of the local form of treatment and preventive institutions. The materials and objects of the study are GERD based on 123 medical records of inpatients and medical prescription sheets of the Chernivtsi medical institutions.

The analysis was carried out on the basis of medical records of inpatients and medical records of medical institutions. According to the research, the group of antisecretory agents and peristalsis stimulants were the most widespread drugs. To perform pharmacoeconomic studies, an indicator of treatment effectiveness was found. It was estimated that combinations proved to perform the best, as the performance indicators for Nolpaza + Itomed and Esolong + Itomed were almost the same - 0.87 and 0.88 respectively. Nolpaza + Itomed (elimination of the heartburn problem after 9.6 days) and Ezolong + Itomed (heartburn disappeared after 10.3 days) demonstrated the best effectiveness in eliminating heartburn.

As the clinical efficacy of the Esolong + Itomed and Nolpaza + Itomed treatment regimens is approximately the same, we conducted a pharmacoeconomic analysis of the cost minimization. Comparing the data, it is noticeable that the cost of treatment with the drugs is almost the same - "Ezolong + Itomed" was 33.75 UAH, and "Nolpaza + Itomed" 30.58 UAH. Whereas the cost of therapy regimen of "Esolong + Itomed" is worth more (472,51 UAH) than the cost of pharmacotherapy "Nolpaza + Itomed" (428,12 UAH). Therefore, according to the results of clinical and economic analysis of the "cost minimization" from the economic point of view, the combination "Nolpaza + Itomed" is optimal, and in terms of efficiency, it is still significantly ahead of other schemes of pharmacotherapy of GERD. Therefore, these drugs are a matter of choice in the treatment of this disease.

Therefore, the data obtained is viable for further research and revision of the local forms of treatment and prevention facilities to include these drugs in the group of antisecretory and propulsive agents.

**Novychenko S.D.**

## **CHARACTERISTIC OF LIPID LEVELS IN PATIENTS WITH DIABETIC NEPHROPATHY AND HYPERTENSION**

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One of the most serious microvascular complications of diabetes mellitus (DM) is diabetic nephropathy (DN). The occurrence of diabetic nephropathy in type 2 diabetes patients is 55%. Renal damage occurs in DM and causes or intensifies the progression of hypertension, finally resulting in the development of chronic kidney failure. Dyslipidemia is one of the risk factors for DN development. Low-density lipoproteins (LDL) are conjugated and oxidized by mesangial cells, stimulating proliferation of mesangium and development of glomerulosclerosis. In addition, lipoproteins filtrated through the glomeruli accumulate in the tubules and induce tubular-interstitial inflammatory processes, as well as an interstitial sclerosis, causing progression of chronic kidney disease (CKD) and development of kidney failure. Therefore, diabetic dyslipidemia is characterized by an increased concentration of TG, LDL cholesterol and decreased concentration of HDL cholesterol.

84 patients with type 2 diabetes mellitus aged from 47 to 75 with the duration of the disease for 10-15 years were examined at the Department of Nephrology of the Regional Clinical Hospital of Chernivtsi. All the patients were distributed between two groups: I group included 43 patients with I degree CKD and IV degree DN, II group included 41 patients with II degree CKD and IV degree DN. Every group was divided into subgroups (with and without I or II degree arterial hypertension (AH)). The control group included 19 conditionally healthy individuals. Patients in all