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## **STUDY OF FATTY ACID COMPOSITION IN STEMS AND ROOTS OF SAPONARIA OFFICINALIS L.**

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Modern ideas about the role of polyunsaturated fatty acids in human health date back to 1980 and their further study remains topical today. Fatty acids play an important role in the biochemical processes of the human body, they affect the growth, formation and functioning of blood vessels, participate in the formation of cell membranes, the nervous system, and help improve the structure of the skin and hair. These compounds regulate important body functions such as blood pressure, individual muscle contraction, body temperature, platelet aggregation, and inflammation. Therefore, the study of the fatty acid composition of medicinal plants is one of the promising tasks of Pharmacy and Pharmacognosy.

*Saponaria officinalis* is a plant that requires more thorough phytochemical study for further drug development.

Therefore, the aim of our research was to study the qualitative and quantitative content of fatty acids in *Saponaria officinalis* depending on plant organs. The object of the study was the stems and roots of common soapwort, which sprouted in natural conditions in the Chernivtsi region. Raw materials are harvested during the flowering period (stems) and after the death of the aboveground part (roots). The study was conducted by the chromatographic method.

The results of the conducted studies indicate a rich fatty acid composition in common soapwort. The presence and quantitative content of 22 substances related to fatty acids were established, 12 of which were identified. The results of the study show that the content of fatty acids varies in composition and quantity in the stems and roots of *Saponaria officinalis*. So such fatty acids as nonadecanoic, pentadecanoic, stearic, linoleic, eicosanoic, behenic, lignoceric have been detected in the roots of the plant. The stems contain the following fatty acids: palmitic, stearic, L-linoleic, arachidic, tricosanoic, tetracosanoic, capronic.

Therefore, this content of fatty acids indicates that the plant is promising for further study. The conducted studies make it possible to predict the use of raw *Saponaria officinalis* for the prevention and treatment of diseases of the cardiovascular system, metabolism and inflammatory processes due to the high content of fatty acids.

**Matushchak M.R.**

## **RESULTS OF ANALYSIS OF FACTORS OF ADVERSE DEVELOPMENT OF LYMPHOGRANULOMATOSIS AS A BASIS FOR ORGANIZATION OF EFFECTIVE PHARMACEUTICAL PROVISION FOR ONCOHEMATOLOGICAL PATIENTS**

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Among malignant lymphomas – lymphogranulomatosis (LGM) occupies a special place, which is due to the action of a range of factors. On the one hand, LGM is a relatively rare disease (0.5–1% of all cancers and about 30% of the total number of lymphomas) with comparatively high rates of cure, and on the other – at the age of 15 to 24 years, almost every 6th case of oncological diagnosis falls on LGM. In recent years, the use of highly effective antitumor agents (AA) with targeted action, as well as other methods of treatment of LGM has become increasingly common. The search for effective use of AA requires thorough research in determining the most influential factors in the adverse development of this pathology. This issue determined the purpose of our research.

The purpose of the study is to analyze the data of modern literature, covering the organization of the treatment process of patients with LGM and to determine the factors of its unfavorable development in oncohematological patients.

Systematizing the results of research, it can be argued that modern schemes of combined chemotherapy and radiation therapy have significantly increased the treatment effectiveness of



patients with LGM, regardless of the course and stage of development of the pathological process. In economically developed countries, such an important indicator as the 5-year overall survival of patients with LGM is 96.0%. Unfortunately, in Ukraine, it is approximately 75.0%. Important in the organization of effective chemotherapy of LGM is the use of a differential approach to treating different groups of patients, which are determined by the analysis of adverse prognostic factors. According to experts, the selection of adverse factors in the course of LGM with the subsequent distribution of patients to the appropriate prognostic groups is one of the priority strategic directions in the development of oncohematology. The use of this approach has a significant impact on the organization of the pharmaceutical supply for specialized health care facilities, which are known to be financed from public funds. Thus, in the middle of the XX century the first factors that could predict the course of the disease, the choice of treatment and the corresponding AA were the stage of the disease and the presence of symptoms of intoxication. Currently, the treatment strategy for patients with LGM has significant differences. The main groups of factors of adverse development of LGM specialists include: a set of characteristics that are due to the biology of the tumor, primarily the number of tumor cells, the level of their proliferative activity and propensity to apoptosis, the degree of expression of various antigens; features of tumor development, which are due to genetic factors; a set of factors that characterize the reactivity of the microenvironment (the composition of the reactive infiltrate, its quantitative and qualitative characteristics, the expression of activating antigens, etc.); indicators of the effectiveness of the interaction of the tumor with the cellular elements surrounding it (the level of expression of cytokines, chemokines, adhesion); a set of parameters that characterize the general condition of the natural and specific parts of the immune system of patients with LGM.

In conclusion, it can be argued that the organization of pharmaceutical support for patients with LGM is a problematic issue. An important area of research is the further search and study of prognostic factors that will allow not only to build the right tactics for the treatment of LGM but also to organize rational models of their pharmaceutical support with conditional healthcare resources.

**Melnychuk S.P.**

## **EMOXYPINE PREVENTS STRUCTURAL CHANGES IN KIDNEYS IN RATS WITH ACUTE KIDNEY INJURY**

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Acute kidney injury (AKI) complicates the course of a large number of diseases, and therefore accompanies most cases with the background of existing hypoxia. A large arsenal of drugs is used to prevent and correct hypoxia of various origins, but only antihypoxants are drugs that can compensate energy deficiency and protect cells from damage by combining the properties of a membrane stabilizer and antioxidant. Particular attention in this regard is drawn to the drug emoxypine - a synthetic water-soluble derivative of 3-oxypyridine, having anti-stress, anticonvulsant, anxiolytic, sedative, angioprotective, antiplatelet, and cardioprotective activity.

The aim of the study was to study the effect of the antihypoxant emoxypine on the histological structure of rat kidneys in conditions of the experimental rhabdomyolysis-induced AKI.

The experiments were performed on 36 white laboratory male rats of reproductive age weighing 140-180 g, which were kept on a standard balanced diet with free access to water. Animals were divided into 3 groups (n=7): the I group consisted of intact animals; animals from the II group were once injected intramuscularly with 50% glycerol solution at a dose of 8 ml/kg (rhabdomyolysis-induced AKI model); the III group animals were injected intraperitoneally with emoxypine at a dose of 100 mg/kg 6 hours after the AKI modelling. Documentation of pathological processes was performed by computer morphometry of objects in histological specimens. For the statistical analysis SPSS 17.0 software was used.

In the kidneys of rats with rhabdomyolysis-induced AKI after 24 h of the experiment was found the obstruction by myoglobin and protein casts of the  $74 \pm 1.3\%$  of the lumens of the