INFLUENCE OF EXTRACTS FROM ARONIA MELANOCARPA LEAVES ON URIC ACID METABOLISM IN RATS

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Introduction. Taking into account the growing interest in traditional medicine there is a great demand for planned research of herbal drugs phyto-pharmacological properties. For the many plants the broadening of types of plant raw material that are used for development of drugs is reasonable. One of such plants is aronia or chokeberry (Aronia melanocarpa (Michaux.) Elliot) which fruits are widely used in atherosclerosis, arterial hypertension, blood coagulation disorders etc. The leaves of aronia are believed to be the perspective raw materials, as their extract, according to the experimental data available in literature, counteracts the disturbances of glucose metabolism and peroxidative oxidation balance. It is rational to investigate the influence of the aronia leaves extract on uric acid metabolism that is closely associated with carbohydrate metabolism, oxidation as well as arterial hypertension pathogenesis.

Objects. Water and ethanol extracts of the aronia leaves were obtained at the department of pharmacognosy (NUPh) by post-graduate V.A. Samojlova. The model of potassium oxonate-induced hyperuricemia in rats was used (all studies were in accordance with the bioethics requirements). The doses of the extracts have been chosen according to the data of previous experiments on the intact rats that elucidated the influence of aronia leaves extracts on the uric acid renal excretion under the conditions of water load induced diuresis. The contribution of renal mechanism to the possible effectiveness of aronia preparations on the beforementioned model of hyperuricemia was estimated. Urochol was chosen as the reference drug of herbal origin with the proven influence on the renal excretion of uric acid.

Results. It has been established that the investigated preparations differ in their influence on the excretory renal function under the conditions of hyperuricemia in rats. One of aronia extracts shows a tendency to the increment of uric acid excretion coupled with the favourable increase in diuresis and reduction of uric acid concentration in urine that to some extent reminds the effect of Urochol.

Conclusion. The results substantiate the expediency of further investigation of the preparations obtained from aronia leaves in order to ascertain their mechanisms of action and phytopharmacological patterns.