

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»**



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loss agents. *Vaccinium myrtillus*, which contains the glycosides myrtilin and neomyrtilin, has anti-diabetic activity as well as a regenerating effect on the pancreatic parenchyma. Blueberry preparations such as "Blueberry extract" and "Blueberry shoots" are used to treat mild forms of diabetes. Sash pods of *Phaseolus vulgaris* are used in the drugs "Glyfazin" and "Imunin - Norton," which have hypoglycemic, diuretic, and antibiotic properties due to the presence of betaine, amino acids, choline, and hemicellulose. Because of its high concentration of anthraglycosides, resins, essential oils, enzymes, and amino acids, aloe vera improves glucose tolerance, has anti-inflammatory activity and promotes wound healing. On the pharmaceutical market, the following drugs are available: "Aloe extract liquid - Darnitsa," "Aloe tablets," and "Aloe extract." Only two herbal anti-diabetic teas are currently registered in Ukraine: "Arfazetin" and "Sadifit," which contain plants such as *Vaccinium myrtillus*, *Phaseolus vulgaris*, *Eleutherococcus senticosus*, *Rosa canina*, *Equisetum arvense*, *Hypericum perforatum*, *Chamomilla recutita*, *Helianthus tuberosus*, *Stevia rebaudiana*, *Mentha piperita*, *Thea sinensis*. The complex of biologically active substances allows them to regulate digestive tract function, stimulate pancreatic activity, and normalize metabolic processes. The use of phytodrugs results in a reduction in the daily dose of oral antidiabetic drugs in patients with type 2 diabetes. *Inula helenium* and *Taraxacum officinale* are promising in the use and research of medicinal plant raw materials as hypoglycemic agents. We discovered that extracts of *Taraxacum officinale* (60%) and *Inula helenium* (70%) have a strong hypoglycemic effect that is 2.5 and 1.5 times stronger than the comparison drug - tea "Arfazetin." As a result, research into medicinal plants as monodrugs and in combination with other drugs continues to be a promising area of study in medicine and pharmacy.

Conclusions. Inclusion of phytodrugs in the treatment of type 2 diabetes is thus one of the promising areas of glycemic control, and the study of new medicinal plants is a promising area of pharmaceutical industry development.

Fedotova M.S.

RESULTS OF STATISTICAL ANALYSIS OF DATA OF PATIENTS WITH ALZHEIMER'S DISEASE

Department of Pharmacy

Bukovinian State Medical University

Introduction. Taking into account the urgency of the process of reforming the national health care system in the direction of implementing rational models of resource provision for patients, including the psychoneurological direction, as well as taking into account the objective processes of population aging, people's desire to improve the quality of their lives, the extension of the period their ability to work, the issue of analyzing the state of pharmaceutical support for dementia patients with Alzheimer's disease (AD) is socially important.

The aim of the work. Determination of the actual state of providing pharmaceutical assistance to the population with the diagnosis of Alzheimer's disease.

Materials and methods. 200 medical records (MR) of patients with the diagnosis of AD (code F00* according to the International classification of diseases of the tenth revision), who underwent a course of treatment based on specialized health care facilities during 2020–2022, were chosen as the research material. General theoretical and applied research methods were used.

Results. The results of the statistical analysis of MR show that in the total population of patients with the diagnosis of AD, there were 96 males (48% of the total number of patients), and women - 104 (52%). By age, the patients were divided into the following groups: under 40 years (4 patients - 2% of the entire population of patients), 40-49 years (9 - 4.5%, respectively), 50-59 years (32 - 16%), 60-69 years old (43 - 21.5%), 70-79 years old (63 - 31.5%), 80-89 years old (43 - 21.5%), 90-99 years old (6 - 3%). The average age of patients is 69.3 years. The main number of patients with Alzheimer's disease (77.5%) were found to be persons of incapacitated age. It should be noted that the obtained data indicate a clear dependence of the incidence of AD in the population on age. In general, the majority of patients was found to belong to socially vulnerable population groups. Thus, the specific weight of pensioners was 71.0%, and 40 patients (20.0%) belonged to

disability groups. The structural analysis of MR by comorbidities shows that 94% of patients had comorbidities in addition to the main diagnosis.

Conclusions. Taking into account the results of the MR analysis, it can be stated that patients with AD need social protection from the state. Alzheimer's disease causes are a significant burden on the budget due to indirect costs that involve an increase in social benefits.

Filipets N.D.

EXPERIMENTAL STUDY OF THE KIDNEY FUNCTIONS CHANGES AFTER PHARMACOLOGICAL ACTIVATION OF POTASSIUM CHANNELS

*Department of Pharmacology
Bukovinian State Medical University*

Introduction. Adenosine triphosphate-sensitive potassium (KATP) channels of cell membranes play a special role in the mechanisms of restoration of disturbed oxygen homeostasis of the body. Their opening in response to a decrease in the intracellular ATP pool stabilizes energy processes, activates physiological reactions to hypoxia. The unique biological ability of KATP channels determines their research as targets for pharmacotherapy of multiorgan dysfunctions caused by hypoxia. Among the openers of KATP channels is Flocalin, which due to the presence of a fluorinated radical has powerful cardioprotective and vasodilating properties. Taking into account the presence of cardiorenal functional interconnections, it is logical to assume renal effects of Flocalin.

The aim of the study was an experimental investigation of Flocalin effect on the glomerular filtration rate (GFR) and indicators of proteinuria under the conditions of the initial stage of the development of acute hypoxic nephropathy.

Material and methods. The functional state of the kidneys was evaluated after a single administration of Flocalin (5 mg/kg, on 1% starch mucus, intragastrically) to laboratory white rats weighing 0.15-0.17 kg against a background of 5% water load in 2 hours after hypoxic kidney damage. Acute hypoxic nephropathy was modeled by sequential administration of sodium nitrite (50 mg/kg, subcutaneously) and 2,4-dinitrophenol (3 mg/kg, intraperitoneally). As a result of the action of the former of methemoglobin and the disconnection of the oxidation and phosphorylation processes, histological hypoxia occurred. GFR was assessed by the clearance of endogenous creatinine, the concentration of protein in urine was determined by the sulfosalicylic method.

Results. The glomerular reaction in rats with hypoxic nephropathy was characterized by an increase in GFR by 36.1%. Mechanisms of changes can be considered powerful systemic vasodilatation, increase in renal blood flow, in particular, microcirculation. The damaging effects on the juxtaglomerular zone, which is particularly sensitive to hypoxia, decreased, and the activity of the renin-angiotensin system was suppressed. The evaluation of the dynamics of proteinuria showed that after the activation of KATP channels, the concentration of protein in the urine decreased by 53.5% and the excretion of protein by the kidneys decreased by 41.8%.

Conclusions. Due to the improvement of intrarenal hemodynamics and the strengthening of compensatory antihypoxic reactions, both the selectivity of the glomerular filtration barrier and the permeability of the tubular part of the nephron for protein were stabilized after the use of Flocalin. Therefore, an increase in the rate of glomerular filtration, a decrease in the loss of protein in the urine, after the introduction of Flocalin under the conditions of the initial stage of the development of acute hypoxia, indicate nephroprotective properties and complement the spectrum of protective effects of KATP channels activator.