

to inhibit the growth of breast cancer cells by inducing apoptosis and inhibiting angiogenesis in a study conducted by Pang et al. (2009). Furthermore, BA has been shown to have chemopreventive effects. In a study conducted by Zi et al., (2014) BA was found to inhibit the growth of colon cancer cells in a mouse model of colon cancer. BA was also found to inhibit the growth of lung cancer cells in a mouse model of lung cancer in a study conducted by Liu et al. (2002).

Boswellic acid has been found to exhibit gastroprotective activity by protecting the gastric mucosa from injury induced by various irritants such as alcohol and nonsteroidal anti-inflammatory drugs. This effect is thought to be due to its ability to inhibit the activity of leukotrienes and reduce inflammation in the stomach (Singh et al., 2008).

Boswellic acid has been shown to possess antimicrobial activity against a variety of microorganisms including bacteria and fungi. This effect is believed to be due to its ability to disrupt the cell membrane of microorganisms and inhibit their growth (Roy et al., 2019).

Boswellic acid has been found to promote wound healing by enhancing the production of collagen and reducing inflammation at the site of injury. This effect is thought to be due to its ability to modulate the activity of various growth factors involved in the wound healing process (Ammon et al., 2002).

BA has been found to be safe for human consumption with no significant adverse effects reported in clinical trials. However, it is important to note that BA can inhibit the activity of cytochrome P450 enzymes, which are responsible for the metabolism of many drugs. Therefore, caution should be exercised when using BA in combination with other medications.

**Conclusion.** Boswellic acid is a promising bioactive compound that exhibits a wide range of pharmacological properties, including anti-inflammatory, analgesic, and anticancer activities. Although further studies are needed to elucidate its full therapeutic potential and safety profile, boswellic acid holds promise as a natural alternative to conventional treatments for various diseases.

## **OPTIMIZATION OF PATHOGENETIC THERAPY IN PATIENTS WITH PSORIASIS**

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**Introduction.** The proposed therapy is based on the task of increasing its effectiveness in patients with progressive psoriasis by supplementing conventional therapy with drugs that correct metabolic processes of the body, as well as pharmacological agents that suppress proliferation. The biological amino acid-coenzyme complex Cardonate is recommended as a corrector of metabolic processes, which is the main regulator of lipid metabolism in the liver, skeletal muscle, myocardium, promotes the removal of metabolites and toxic substances from the

cytoplasm, improves metabolic and bioenergetic processes; under conditions of normal oxygen supply, it switches cell metabolism to the oxidation of fatty acids as the most energy-intensive substrate, and under hypoxia, it removes toxic fatty acid metabolites from mitochondria, switching cell metabolism to glucose oxidation.

**The aim** of the study is to optimize the treatment of psoriatic disease with the Cardonate amino acid-coenzyme complex.

**Materials and methods.** To evaluate the effectiveness of treatment of patients with widespread psoriasis using the amino acid-coenzyme complex Cardonate, patients were divided into three groups. The first group (n=21) included patients who received general topical therapy with the addition of Cardonate, 1 capsule 3 times a day. The second group (n=34) consisted of patients receiving a traditional complex of systemic and topical therapy. The third group (n=66) of patients with widespread psoriasis received treatment according to the traditional regimen supplemented with the inclusion of the amino acid-coenzyme complex Cardonate. The effectiveness of treatment was assessed by the results of the study in the dynamics of observation before and after therapy of metabolic parameters.

**Results and discussion.** The study of the effectiveness of patients treatment with widespread psoriasis was carried out by monitoring the metabolic parameters of protein and lipid metabolism. The results of the metabolic parameters of three groups of patients with widespread psoriasis were compared with the dynamics of similar indicators before and after treatment, as well as with a group of conditionally healthy patients. The analysis of structural and metabolic processes revealed a slight decrease in the activity of ALT and AST enzymes in patients before treatment compared to the group of conditionally healthy patients, although these values did not go beyond the limits of fluctuations in physiological levels. High values of these parameters were noted in three of the 121 patients examined, while the average values of ALT and AST from the entire sample were within normal reference levels. It should be noted that the difference in ALT and AST activity between the group of psoriasis patients and conditionally healthy patients was statistically significant. The dynamics of the activity of these enzymes nevertheless indicates a certain functional deficiency of the metabolic processes in which ALT and AST are involved, namely the processes of transamination of amino acids. In patients with widespread psoriasis, this indicates a disturbance of protein metabolism and especially amino acid deamination. After treatment, ALT and AST activity increased in patients with widespread psoriasis. In the first group, these values did not differ significantly from those before treatment. In the second group of patients treated with the traditional method, the increase in ALT and AST activity was more significant and reliable compared to the results before treatment. The most significant was the correction of aminotransferases in patients of the third group who received a traditional treatment complex with the amino acid- coenzyme Cardonate. Indicators in this group of patients increased significantly during treatment and approached the levels of conditionally healthy patients.

The results showed that 20% of patients with widespread psoriasis had a decrease and 3% had an increase in the activity of the organ-specific enzyme alkaline phosphatase. The average values of alkaline phosphatase activity were also within the

reference levels. However, these data indicate a metabolic restructuring in the liver, connective tissue and kidneys in some patients with psoriasis. After treatment, the activity of alkaline phosphatase increased to the level of conditionally healthy individuals only in the third group of patients with widespread psoriasis, which indicates the effectiveness of treatment with the traditional method and the amino acid-coenzyme complex Cardonate. In the first and second groups of patients with disseminated psoriasis, treatment was ineffective.

The total protein content was elevated in 95% of cases with normal serum albumin values, indicating that it was increased due to globulin fractions. Such dynamics often indicates the possible development of infectious allergic and autoimmune processes.

The indicator of carbohydrate metabolism monitoring - glucose - decreased in 37.5% of cases and increased in 8% of patients with disseminated psoriasis, which together makes up a significant proportion of patients with carbohydrate metabolism disorders (45.5%). Studies have shown a rapid high rise and gradual fall in blood glucose levels after exercise, indicating a decrease in glucose tolerance. After treatment, the glucose dynamics in the observed groups did not change significantly.

As for lipid metabolism products, 12% of patients with widespread psoriasis had an increase in total cholesterol and 9% in triacylglycerols. A decrease in these indicators was noted in two patients, which is 1.65% of the total number of patients. The average values of total cholesterol and triacylglycerols for the entire group of patients with psoriasis before and after treatment were at the level of physiological reference values and did not change significantly during therapy.

**Conclusions.** Thus, the studies show that after treatment, a significant number of monitoring metabolic parameters in the third group of patients with disseminated psoriasis significantly approached the levels of the conditionally healthy group of patients.

The use of complex treatment with the amino acid-coenzyme preparation Cardonate significantly improved the parameters of protein, carbohydrate and lipid metabolism, which indicates the possibility of its use in clinical medicine.

## **STUDY OF THE COMBINED USE OF PIRACETAM AND MEMANTIN IN ACUTE HYPOXIA OF THE BRAIN OF RATS**

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**Introduction.** Issues of pharmacotherapy of cerebral pathology, which occupies one of the first places in the structure of general mortality in Ukraine, are of particular importance.

Severe medical and social consequences of ischemic stroke, its significant prevalence, including among the population of working age, determine the relevance