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EFFICIENCY OF OZONE THERAPY IN COMPLEX TREATMENT OF PATIENTS WITH BRONCHIAL ASTHMA WITH DISORDERS OF CARBOHYDRATE METABOLISM

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Purpose:
To study the effectiveness of ozone therapy in the complex treatment of patients with bronchial asthma with carbohydrate metabolism disorders.

Methods:
In 34 BA patients with concomitant disorders of carbohydrate metabolism, who are being treated at the pulmonology department of the Research Institute of Physical and Physical Problems of the Ministry of Health of the Republic of Uzbekistan, the ozone therapy method was used, including various methods of its administration for 10 days. The effectiveness of ozone therapy was assessed by the dynamics of indicators of pentose phosphate shunt (erythrocyte G-6-PDG) and glycolytic shunt (2,3-diphosphoglycerate).

Results:
Synchronous disturbances in the glycolytic and pentose cycles were found in 36.7% of asthma patients with concomitant disorders of carbohydrate metabolism, manifested by a decrease in the activity of erythrocyte G-6-PDG or glycolysis product -2,3 diphosphoglycerate. This causes deeper disturbances of redox processes, aggravating the state of tissue hypoxia, and does not provide adequately the necessary energy consumption of the body. The inclusion of ozone therapy in the complex treatment of BA patients with associated disorders of carbohydrate metabolism causes stimulation of the pentose phosphate shunt and aerobic glycolysis, which is characterized by an increase in the activity of erythrocyte G-6-PDG from 106.8 ± 11.9 units to 156.7 ± 9.25 units and increased formation of 2,3-

diphosphoglycerate from 4.12±0.29 µmol/ml to 5.92±0.24 µmol/ml. An increase in the formation of 2,3 DPG under the action of ozone contributes to a shift in the dissociation curve of oxyhemoglobin to the right and contributes to a better return of oxygen to tissues and a decrease in tissue hypoxia.

Conclusion:

Under the influence of ozone therapy, the pentose-phosphate shunt and aerobic glycolysis are stimulated, leading to the suppression of gluconeogenesis processes and the improvement of the redox processes of tissue respiration.