VASCULAR ULTRASONOGRAPHIC AND ELECTROPHYSIOLOGICAL STUDY IN PATIENTS WITH DIABETIC RETINOPATHY

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Introduction. Diabetic retinopathy (DR) is one of the leading causes of vision loss in the working-age adult population.
Purpose. Ultrasonographic evaluation of carotid vessels and electrophysiological examination by visual evoked potentials (VEP) in patients with diabetic retinopathy.
Materials and methods. 216 patients suffering from type II diabetes were selected, who were separated into 2 groups, the base group included 108 patients with various degrees of DR, and the control group included 108 patients without DR.
Results. The average age of the participants in the base group was 60.33±10.54 years, and in the control group 66.6±5.7 years. The base group was separated into 2 subgroups, subgroup 1 A included patients with severe forms of DR, such as severe nonproliferative retinopathy and proliferative form of diabetic retinopathy, and subgroup 1B which included early and intermediate forms of DR. Patients with advanced forms of DR associate atherosclerotic plaques at the level of carotid arteries in more than half of cases (62.6%), while diabetic patients who do not present characteristic changes of DR associate atherosclerotic plaques in 29.6%. A correlation was found between the values of the intima-media thickness and total cholesterol, as well as triglyceride levels in both study subgroups, while in the control group rxy=0.34 for total cholesterol.
VEP study demonstrated that in patients with DR the latency of the P wave is statistically significantly increased compared to the control group (p=0.01).
Conclusions. It was highlighted that the degree of diabetic retinopathy is related to the frequency of atheromatous plaques at the level of the internal carotid arteries, the extracranial segment, on the same side as the affected eye. VEP study demonstrated that patients with diabetic retinopathy have a statistically significantly increased P-wave latency period, indicating more severe damage to the optic pathways.