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Indicators of autonomic regulation in evaluating prognostic risk in patients with diabetes

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Objective: The objective of this study is to determine the prediction of autonomic regulation parameters in diabetic patients.

Methods: Study involved 112 patients with type 2 diabetes (DM2) and 46 with type 1 diabetes (DM1). Glycemic level was controlled by WHO recommendations to evaluate heart rate variability spectral analysis. Method of estimating the base component of the rehabilitation potential- morphology function index (MFI) was used to assess prognosis of disease.

Results & Conclusion: Poor compensation of diabetes resulted in significant changes in HR variability, but direction and severity of disorders in patients with different types of diabetes was not same. The circadian index in patients with DM2 was less, which is possible only with the express violation of the central and autonomic regulation. High power frequency is typical for severe vegetative neurosis and disruption of the autonomic regulation. Decompensation of DM1 was not reflected in the CI, but was accompanied by reduction of the total power spectrum. Factor of vagosympathetic balance on the background of decompensation was higher than average. In patients with DM2 decompensation, and accompanied by autonomic imbalance, proceeded against the backdrop of the increased activity of parasympathetic nervous system. A number of indices for the rehabilitation of adverse prognosis (MFI-1) patients with DT1-TC<1500 ms² (RR=2.5), VLF<50% in the structure of the spectrum (RR=1.46), LF/HF-3.0 (RR=1.77), IC -3.50 (RR=3.52), the index of regulatory systems tension (RR=3.1). In patients with DM2, symptoms of autonomic dysfunction were observed with the onset of the disease.

Biography

Kurnikova I A is a Doctor of Medical Science (since 2010). She has worked on the problems of endocrinology for over 20 years. She was the Head of Endocrinology department at the Russian Scientific Center of Medical Rehabilitation and Health Resort (Moscow, Russia). Currently, she teaches at the Peoples' Friendship University of Russian and Curator of the Scientific Direction Endocrinology. She has published more than 20 articles in reputed journals, and author of 25 books and tutorials in Russian language.

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