

EFFECT OF METABOLIC SYNDROME ON HEART RHYTHM DISTURBANCES

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BACKGROUND / AIMS: Arrhythmias associated with the metabolic syndrome (MS) are not often investigated. The aim of this work was to study the effect of metabolic disorders associated with arrhythmias of various types on electrophysiologic indices (EI) of the heart conduction system and on causal factors.

METHODS: The study involved 127 patients with different arrhythmias. These were divided into two groups: 55 (43.3%) patients with arrhythmias and MS (group 1), and 72 (56.7%) patients with arrhythmias but without MS (group 2). For both groups, patients with similar degrees of CVD severity were selected as it permitted clearer evaluation of the effect of metabolic disorders on the heart conduction system.

MS was diagnosed by the WHO 2002 classification.

Patients from both groups underwent invasive electrophysiological study.

Data obtained were entered into an SPSS database.

RESULTS: Such EI indices of the heart conduction system as functional and effective refractory periods of the left and right ventricles, AV knot, various regions of right atrium, restoration time of sinus knot function, correlation time of sinus knot restoration period, and sinoatrial conduction according to O. Narulas method deviated from normal more significantly in group 1 than in group 2. Together with surgical treatment (ablation of radiofrequency of AV knot and implantation of an electrocardiostimulator), metabolic disorders were corrected with drugs and diet.

DISCUSSION / CONCLUSIONS: MS has an aggressive effect on the EI of the heart conduction system, as revealed by the atypical course of rhythm disturbances (i.e. it may be corrected by anti-arrhythmic drug administration).

In patients with MS, it is obligatory to correct metabolic disorders together with surgical treatment of arrhythmias.

Keywords : metabolic syndrome, Arrhythmias, ablation