The Journal of
Heart Disease

ABSTRACTS

OF THE 1st INTERNATIONAL CONGRESS ON HEART DISEASE - NEW TRENDS IN RESEARCH, DIAGNOSIS AND TREATMENT

WASHINGTON, DC, USA, MAY 16 – 19, 1999

JOURNAL OF THE
INTERNATIONAL ACADEMY OF CARDIOLOGY

PUBLISHED BY
INTERNATIONAL ACADEMIC COMMUNICATIONS, Inc.
Presented here was an experience of using a relatively new method of a diagnosis of cardiac arrhythmias (CA) - rhythmo-cardiography (RCG) with a correlating and spectral analysis of sinus heart rhythm (HR) wave structure. The following RCG indices were evaluated at rest (Ph) and directive stimulant tests Valsalva, Ashner, active orthostatic, physical exercise (Vm, Pa, Aop, PL) average HR, dispersion of HR waves with high, middle, low frequencies (Em, om, el), as a signs of vagal, sympathetic and humoral influences on HR, and their spectral interaction (coherence, om, El), also meanings of maximal reaction (HRR), its time (tM), restorative time (tR) at tests. For RCG investigations was created an apparatus-program complex "Miroc". One of distinctions of RCG is a construction of rhythmocardiogram (RCCm) on a screen. RCCm is a successive row of parts of rectilinear images, equivalent in length to phases between systoles. The duration of these pauses depends on regulative factors, forming HR waves of different frequencies - less 0.63, 0.03-0.12, 0.012-0.28 Hz and more. 964 pts with CA were investigated. RCG data were verified by ECG, EchoCG, Holter monitoring tests. RCG was very suitable for registration of CA clinical forms. A number of them has the certain characteristics on RCCm. It may be possible to differentiate an auricular and ventricular extrasystoles and atrial fibrillation had the certain forms (48 and 48 pts). RCG allows to evaluate a background of CA. An infringement of a coronary circulation was represented by HR stabilization (low meanings of om, em). Low reaction on Aop (AHR) mean significant HR stabilization during physical exercise in PL. Maximal frequency of CA was in Aop and PL. CA connection with myocardial breach was on the background of increase inA op, PL, significant prolongation tr after lead. An ectopic activity was increased at weakening of the sinus node in Vm, Pa. Sinoatrial block, as SSH, had the inhibitory signs - bradycardia(high RR) and HR stabilization, as symptoms of oppression of autonomic influences on HR (low om, EM, om%, Em%, %). An electrical myocardial instability was showed by a super-compensative interval after extrasystole on the sympathetic HR wave. Vasovagal syncopen were registered by an increase RR and simultaneous decrease of blood pressure, corresponding to low om on RCCm. Tachycardia, significant lowering of all RCG indices, except E, om%, and an absence of any HR reactions on stimuluses corresponded to an autonomic cardiomegaly and high risk of a lethal outcome. RCG was useful for definition of extra- and intracardiac influences on CA frequency (245,446 pts), for selection of a drugs with autonomic synaptic activity, control of its efficacy. Thus, RCG was useful for definition of CA form, their background, extraclinic influences, selection and control of pharmacotherapy.

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THE RISK FACTORS FOR SYNCopal CONDITIONS DEVELOPMENT IN CHILDREN WITH VENTRICULAR TACHYCARDIAS

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This study's objective was the evaluation of the risk factors for development of syncopal states in children with ventricular tachycardia.

Methods. In 2 patients (12 female and 17 male) at the age of 2-14 (mean age 9.45.3) with different forms of non-paroxysmal ventricular tachycardia we carried out the following: standard ECG, echocardiography, Holter monitoring (HM) [Oxford Medilog-Optima] with heart rate variability estimation, signal-averaged ECG. Also we used clinical genealogical method. All patients had been observed before antiarrhythmic therapy was started.

Results. Polymorphous ventricular tachycardia (VT) was diagnosed in 20 children (of them 6 had syncpe and 10—pre-syncopal episodes); polymorphous VT was diagnosed in 9 children (3 had syncpe). In families of 7 patients heart rate abnormalities and sudden death had been previously met (6 of these patients had polymorphous VT and 2—monomorphous VT). Echocardiography showed right ventricle's cavity enlarged in 3 patients; left ventricular ejection fraction was decreased in 7 patients. According to HM, rigid sinus bradyarrhythmias episodes occurred during the night in 48% children; T-alteration during the night—in 41%; asymptotic episodes of >2.2 s—in 35%; QT-interval prolongation—>400 ms—in 28%. Signal-averaged ECG showed the late ventricular potentials in 75% of patients with polymorphous VT and 36% with monomorphous VT.

Conclusion. QT-prolongation >400 ms (according to 24-hour HM), combined with late ventricular potentials point at high probability of syncpe in patients with polymorphous VT. In patients with monomorphous VT syncpe should be expected if night rigid bradycardia, asystolia >2.2 s, late ventricular potentials and ejection fraction <0.50 are all present.