

and Sn were significantly steeper and QTc was significantly longer in pts at III-IV NYHA than in pts at II NYHA class (Table 1).

Table 1

	Sa	Sd	Sn	QTc (ms)
NYHA II	0,16±0,05	0,15±0,06	0,12±0,05	415,4±25,6
NYHA III-IV	0,22±0,06	0,19±0,08	0,18±0,06	444,6±31,6
p	< 0,001	0,01	0,002	< 0,001

Conclusions: QT dynamics abnormalities as well as the prolongation of the repolarization progress with the severity of heart failure.

606

Is biphasic DC shock more effective than monophasic in conversion of atrial flutter?

A. Feldman¹, D. Antonelli², N.A. Freedberg², A. Darawshe³, T. Rosenfeld²

¹Haemek Hospital, Heart Institute, Afula, Israel; ²Ha'Emek Hospital, Cardiology, Afula, Israel; ³Ha'Emek Hospital, Emergency Medicine Department, Afula, Israel

Transthoracic electrical cardioversion (ECV), traditionally using monophasic shocks, has an important role in the treatment of symptomatic atrial

flutter (A Fl). Biphasic (B) shock waveform has been demonstrated to be more successful than monophasic (M) waveform for termination of ventricular and atrial fibrillation, but data about its use for ECV of Atrial Flutter is limited. We performed prospective comparative study to investigate this point.

Methods: 44 consecutive patients (pts) admitted to Emergency Room (ER) due to symptomatic A Fl were divided to two groups of DC shocks (with Biphasic or Monophasic waveforms). ECV in both groups was started from 20J and in unsuccessful cases was increased gradually to 50J, 100J, 200J and 360J.

Baseline Characteristics: There were 44 pts (30 pts in B group and 14 pts in M group), 72% males, mean age 63.8±13.8, mean BP on admission 137/85 and mean heart rate 106±33, mean weight 83.8±15, 36.4% of pts with history of ischemic heart disease (IHD), 27% with valvular disease, 63.6% with hypertension, 18.2% with diabetes mellitus, 9.1% with chronic lung disease, 4.5% with sick sinus syndrome and permanent pacemaker, 4.6% with history of ischemic stroke, 54.5% of pts were on antiarrhythmic therapy and 56.8% on therapy by b-blockers. In 70.4% it was typical flutter, in 22.7% persistent A Fl. Mean left atrium size was 47.3±14 mm and mean LVEF was 54.6±15%. Chemical cardioversion was attempt in 36.4% of pts. There were no significant differences in baseline characteristics, except for more pts with history of IHD in B group (46% vs. 14.2%, p<0.038).

Results: DC shock with 20J was successful in 41.2% in B group and 40% in M group (p-NS). 50J shock was successful in 73.7% and 62.5% respectively (p-NS). 100J shock success rate was near 77% and 200J or more - in 100% in both groups. Number of shocks per patient was near 1.8 in both groups. Median energy for successful ECV was 50J in both groups. Sinus rhythm was restored successfully in all pts. Mean shock impedance was 82±10 ohm (p-NS). There was just 1 case of transient apnea after ECV successfully treated by mask ventilation.

Conclusions: In our study population there were no significant differences in success rate of ECV of A Fl by Biphasic or Monophasic DC shock. We recommend 50J for starting energy of ECV of Atrial Flutter regardless of waveform's type.

607

Echocardiographic evaluation in patients with atrioventricular reciprocated tachycardias before and after radiofrequency catheter ablation

A. Ardashev¹, V. Steklov², E. Gorbatov², S. Sharonova², O. Derevianko², L. Savina², M. Chernov², A. Shavarov²

¹Burdenko Head Clinical & Military Hospital, Interventional Cardiology Dept., Moscow, Russian Federation; ²Burdenko Head Hospital, Interventional cardiology, Moscow, Russian Federation

Purpose: to estimate echocardiographic characteristics in patients with atrioventricular reciprocated tachycardias before and after radiofrequency catheter ablation (RFA).

Materials and methods: Study was consisted of 139 patients (25 women), 41.3±11.4 years of age. The group 1 consisted of 61 patients (17 women), 45.3±11.4 years of age with typical atrioventricular nodal reentry tachycardia. Their arrhythmia history was 10.1±8.2 years. 58 WPW syndrome patients (11 women), 37.6±14.3 years of age were included into group the 2nd (the duration of arrhythmia was 8.5±6.0 years). During EPS concealed WPW syndrome was verified in 23 (39.7%) patients. Thirty-one (39.7%) patients had left sided accessory pathways. Orthodromic atrioventricular reentry tachycardia was diagnosed in majority of cases (81.0%). Paroxysmal atrial fibrillation was registered in 25 (43.1%) patients. The control group (group the 3d) consisted of 20 healthy unselected subjects (8 women), 41.2±4.6 years of age. All consecutive patients with reciprocating tachycardia underwent RFA. Transthoracic echocardiography was performed before, 2 months, 6 months and 12 months after RFA. We analyzed echocardiographic measurements of group 1, 2 and 3.

Results: There were no significant differences in functional echocardiographic characteristics between the control group and reciprocating tachycardia patients before and after RFA revealed. It is necessary to emphasize that so called "isolated anomalies" of heart connective tissue skeleton were detected in majority of the group 1 (25 (41%) cases) and group 2 (31 (55,4%) cases) patients. Meanwhile only 2 subjects of the control group had connective tissue "anomalies" (supplementary transversal left ventricular chord and elongated Eustachian ridge).

Conclusions: There were no significant differences found among echocardiographic data in reciprocating tachycardia patients before and after RFA. Coincidentally, reciprocating tachycardias may combine with isolated connective tissue anomalies of the hearts of the patients studied.

608

Evaluation of prognostic value of heart rate variability (HRV) and heart rate turbulence (HRT) in patients with congestive heart failure

A. Piatkowska¹, K. Szymanowska², A. Nowicka¹, M. Kandziora¹, M. Wierchowicki¹, W. Biegalski¹, M. Michalski¹, K. Poprawski¹

¹F. Raszeja Hospital, 2nd Dept. of Cardiology, Poznań, Poland; ²Poznań, Poland

Background: congestive heart failure (CHF) is associated with impairment of the autonomic nervous system, which worsen with disease progression. Heart rate variability (HRV) and heart rate turbulence (HRT) can be used as noninvasive methods to study autonomic dysfunction. In some cases measurement of HRV and HRT may be useful to identify patients with high risk for cardiac death.

Aim: the aim of our study was to compare of HRV and HRT parameters in healthy subjects (HS) to CHF pts and to evaluate their prognostic value in pts after 6 month observation.

Materials and methods: 66 pts with CHF (mean age 65 ± 32) and 30 healthy subjects (mean age 56 ± 18) were enrolled to the study. HRV and HRT analysis were performed by 24 - hour Holter ECG in all subjects with sinus rhythm. HRT parameters - TO (turbulence onset) and TS (turbulence slope) were estimated. HRV was described by very low frequency (VLF), low frequency (LF), high frequency (HF), total power (TP) and the ratio of low to high frequency (LF/HF).