

**Comparative assessment of intracardiac hemodynamics state in children with ventricular premature beats from RVOT and LVOT**

*Chernyshov A.A., Kovalev I.A., Zavadovsky K.V., Popov S.V.  
Child's Heart Center, Institute of Cardiology, Tomsk, Russia*

**Objective:** To carry out comparative analysis of intracardiac hemodynamics state in children with ventricular premature beats (VPBs) from RVOT and LVOT, and also its condition after RFA of arrhythmias focus.

**Methods:** Patients of both sexes were included into the study. They had ventricular arrhythmia more than 20% of overall quantity of heart beats per day and without organic and structural heart pathology. The first group consisted of 13 pts at the age of 12-17 years old ( $13\pm 3,7$  years) with extrasystole from RVOT. The second group involved 11 pts at the age of 13-16 years old ( $14\pm 2,3$  years) with extrasystole from LVOT. The control group included healthy volunteers at the age of 12-17 years old ( $13\pm 3,3$  years). Method of quantitative blood pool SPECT was applied for intracardiac hemodynamics assessment.

**Results:** Comparative hemodynamics analysis between the first and the control groups showed no significant differences. In comparison with the control group, decrease of LV EF was disclosed in the group of patients with extrasystole from LVOT. Significant differences of hemodynamics state between the first and the second groups were not discovered. After RFA significant EF increase either of LV or RV was disclosed, stroke volume of RV increased, peak filling rate and mean filling rate of RV for 1/3 diastole increased, time till peak filling rate of RV decreased.

**Conclusions:** Ventricular premature beats from RVOT result in diastolic dysfunction of right ventricle. VPDs from LVOT are accompanied diastolic dysfunction either of right or left ventricles. RFA of arrhythmias focus results in indices normalization of intracardiac hemodynamics.