

RISK STRATIFICATION FOR SUDDEN CARDIAC DEATH AFTER SEPTAL MYECTOMY

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Background

The aim of this study was to determine the long-term outcomes (all-cause mortality, sudden cardiac death (SCD), and incidence of appropriate and inappropriate implantable cardioverter defibrillator (ICD) therapy) after extensive left ventricular septal myectomy (Figure B1) in patients with diffuse-generalized form of obstructive hypertrophic cardiomyopathy (HOCM)

Methods

This study included 54 consecutive patients with diffuse-generalized form (Figure A) of HOCM treated with either the extensive left ventricular septal myectomy (group A) or medical therapy (group B).

Group A consisted of 22 patients (50.1 ± 11.8 y.o., 11 females, 1 LEOPARD syndrome) and group B consisted of 32 patients (43.9 ± 15.1 y.o., 16 females, 1 DANONE disease).

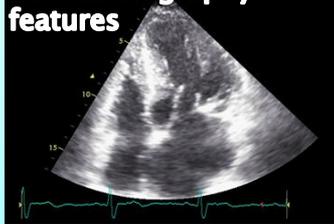
All patients underwent ICD implantation. The risk of SCD was assessed for each patient in group A before and 1 year after surgery and in group B before ICD implantation using standard "HCM Risk-SCD" calculator

Conclusions

Patients with diffuse-generalized form of HOCM who are treated with extensive left ventricular septal myectomy have good survival and low SCD risk, similar to that of patients with non-obstructive HCM. In addition patients in surgery group had an increased incidence of inappropriate ICD therapy

Figures A

Echocardiography features



Results

The mean follow-up period was 2.5 ± 2.2 years.

Risk of SCD before and after procedure amounted to 4.0 ± 1.9 and 1.6 ± 0.6 ($p < 0.05$) in group A and 4.4 ± 2.8 in group B, respectively.

At 1 year after surgery in group A thickness of inter ventricular septum and the left atrium decreased from 19 ± 3 to 15 ± 2 mm and 45 ± 4 to 42 ± 3 mm, respectively.

The peak systolic pressure gradient in the outflow tract of the left ventricle decreased from 76 ± 6 to 20 ± 3 mm Hg.

During the observation period 1 patient with LEOPARD syndrome died probably from electrical storm (group A) and 1 patient died from unknown cause (group B).

The overall mortality was 4.5% in group A and 3.1% in group B ($p = 0.08$). Appropriate ICD therapy was lower (4.5% vs. 6.3%; $p = 0.04$), but inappropriate ICD therapy was higher (9.1% vs. 3.2%; $p = 0.03$) in group A (Figure B2). All episodes of inappropriate ICD therapy were caused by very fast conducted atrial fibrillation

Figures B

