LONG-TERM RESULTS AFTER CARDIAC RESYNCHRONIZATION THERAPY WITH OR WITHOUT SURGICAL REvascularization IN PATIENTS WITH ISCHEMIC HEART FAILURE AND LEFT VENTRICLE DYssynchrony

Poster Contributions
Poster Sessions, Expo North
Saturday, March 09, 2013, 3:45 p.m.–4:30 p.m.

Session Title: Heart Failure: Cardiac Resynchronization Therapy
Abstract Category: 17. Heart Failure: Therapy
Presentation Number: 1177-304

Authors: Alexander Romanov, Evgeny Pokushalov, Alexander Chernyavskiy, Vitaliy Shabanov, Ilia Stenin, Alexander Karaskov, State Research Institute of Circulation Pathology, Novosibirsk, Russian Federation

Background: We have tested the hypothesis whether epicardial cardiac resynchronization therapy (CRT) concomitantly with surgical revascularization is superior to CRT and medical therapy in patients with ischemic heart failure, LVEF<35% and LV dyssynchrony, who were eligible to coronary artery bypass grafting or medical therapy.

Methods: Ninety seven consecutive patients with severe ischemic heart failure were randomly assigned to endocardial CRT implantation plus medical therapy (n=48) or epicardial CRT implantation plus CABG (n=49). The primary end point was reduction in left ventricle systolic volume (LVESV) by 15% measured by echocardiography. The major secondary endpoint included the all cause death. The patients were followed up during 24 months.

Results: At 24 months, the mean LVESV was significantly lower in epicardial CRT plus CABG group compared with CRT plus medical therapy group (115.4±22.4.% vs. 137.8±19.7%, P=0.002). In epicardial CRT plus CABG group 6 patients (12.2%) died at 2-year follow compared with 11 (22.9%) in CRT plus medical therapy group (Log-Rank test, p=0.02). Totally, the number of patients with LVESV reduction by 15% were 37 (86%) in epicardial CRT plus CABG group and 25 (67.6%) in CRT plus medical therapy group (p=0.034).

Conclusions: In ischemic heart failure patients with LV dyssynchrony, who are eligible to surgical revascularization or medical therapy, epicardial implantation of a CRT system concomitantly with CABG is superior to CRT plus medical therapy in terms of cardiac reverse remodeling and is associated with low mortality in long-term follow up.