Left Ventricular Reduction Surgery Compared with Left Ventricular Aneurysmectomy

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Introduction:
Left ventricular reduction surgery is a therapeutic option in the treatment of congestive heart failure. Results of this therapy in patients (pts) with ischemic (ICMP) and dilative cardiomyopathy (DCMP) were analyzed and compared with the results of pts undergoing left ventricular aneurysmectomy.

Methods:
From January 1995 to July 1999 15 pts with DCMP (group I, mean age 58 years), 19 pts with ICMP without aneurysm (group II, mean age 67 years) and 18 pts with coronary artery disease and left ventricular aneurysm (group III, mean age 67 years) were referred to cardiac surgery for reconstruction of left ventricular geometry. During the operation coronary revascularisation and mitral valve reconstruction were performed if necessary.

Results:
In-hospital mortality was 33% in group I, 26% in group II and 6% in group III. One year survival was 67, 58 and 88%, respectively. NYHA functional class improved in all groups significantly (p<0.05): in group I from 3.3 to 2.8, in group II from 3.5 to 2.5 and in group III from 3.0 to 2.2. Left ventricular ejection fraction increased from 18 to 21% in group I (not significantly, n.s.), from 22 to 26% (n.s.) in group II and significantly from 26 to 33% in group III. Left ventricular enddiastolic diameter decreased from 77 to 66 mm in group I, from 72 to 65 mm in group II and from 65 to 60 mm in group III. Cardiac index did not increase significantly in any group.

Conclusions:
Left ventricular reduction surgery is associated with a higher in-hospital mortality than the well established procedure of left ventricular aneurysmectomy. This may be partially explained by a lower preoperative left ventricular ejection fraction of the pts from group I and II. NYHA functional class of surviving pts after partial left ventriculectomy improved although there was no significant postoperative increase in left ventricular ejection fraction.

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