Quality of Mitral Valve Repair: Median Sternotomy versus Port-Access Approach

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Background

The feasibility and safety of minimally invasive mitral valve repair using Port-access approach was previously demonstrated. We compared early and mid term results of port-access approach versus conventional median sternotomy for simple mitral valve repair.

Methods

From 2000 to 2008, 147 patients underwent mitral valve repair for isolated posterior leaflet prolapse; 58 by port-access and 89 by median sternotomy approach. Patients in port-access group were younger (mean age 54±11 versus 59±12, $p<0.05$). Other characteristics including valve pathology and repair technique were comparable between the groups.

Results

There was no early death. Operative, bypass and clamp time were significantly longer in port-access group. Mean hospital stay was 5.7±2.2 days in port-access group versus 5.3±2.7 days in sternotomy group ($p=0.4$). Early post-operative echocardiography showed most patients in both groups had none or trivial MR and none of the patients had more then grade 2 MR. Follow up was complete with mean of 16±20 months. NYHA class improved from 1.9±0.9 to 1.4±0.6 in port-access group ($p<0.05$) versus 2.3±0.9 to 1.6±0.6 in sternotomy group ($p<0.05$). There were 2 late deaths (2.2%) in the sternotomy group. Freedom from reoperation was 96.6% in port-access group (56/58) and 96.6% in sternotomy group (86/89). Echocardiography revealed that 47(81%) had MR grade 0/1, 9(15.5%) grade 2 and 2(3.5%) grade 3/4 in port-access group. In sternotomy group, 85(95%) had MR grade 0/1, 1(1.1%) grade 2 and 3(3.4%) grade 3/4.

Conclusions

In selected cases quality of mitral valve repair with port-access approach compares with conventional median sternotomy approach.