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.