

C6. Systematic Strategy To Attempt Repair Of All Degenerative Mitral Valves Yields A Near 100% Repair Rate

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OBJECTIVES: Although mitral valve repair (MVR) is the preferred treatment for mitral regurgitation (MR) of degenerative etiology, valve replacement for this indication remains too prevalent. We sought to characterize feasibility and surgical outcomes of MVR applied systematically to all patients with degenerative MR.

METHODS: From 2002 to 2008, 481 consecutive patients [mean age 59 ± 14 years (range 18-90), 35% female, mean LVEF $53 \pm 8\%$] underwent surgical intervention for degenerative MR [anterior leaflet prolapse (n=22, 4.6%); posterior leaflet prolapse (n=346, 71.9%); bileaflet prolapse (n=113, 23.5%)]. Degenerative etiology was Barlow's Disease (BD, n=187, 38.9%), Fibroelastic Deficiency (FED, n=225, 46.8%) or Forme Fruste Barlow's/other (FF, n=69, 14.3%).

RESULTS: All patients underwent MVR and received a concomitant annuloplasty with a median ring size of 38mm (IQR36-40), 32mm (IQR30-36) and 30mm (IQR28-32) for BD, FF, and FED respectively ($P=0.001$). There was 1 early valve replacement due to atrio-ventricular hematoma and 1 re-repair at 3 years due to a new chordal rupture. Patients with FED were older (62 ± 14 vs. 55 ± 12 , $P=0.001$), had a higher incidence of chordal rupture (69.8% vs. 35.2%, $P=0.001$) and required less resection techniques (81.1% vs. 93.2%, $P=0.003$). Median length of stay was 6 days (IQR5-8). The operative mortality rate was 0.6% and the Kaplan Meier survival at 1 and 5 years was $97.2 \pm 1.2\%$ and $89.6 \pm 4.6\%$. Post-discharge TTE assessment [mean follow-up 180 days (range 20-2279)] revealed 98.2% freedom from $\geq 2+$ MR.

CONCLUSIONS: With an intention to repair all degenerative valves, and a lesion based approach to MVR, we were able to achieve over 99% repair rate. All degenerative valves are technically repairable with good immediate outcome, regardless of valve morphology, patient age or comorbidities.