Top Ten Things To Know
Mitral Valve Annuloplasty (MVA) in Addition to Coronary Artery Bypass Grafting Improves Functional Capacity and Promotes Reverse Left Ventricular Remodelling

1. The best management of moderate functional ischemic mitral regurgitation (FIMR) is not known.

2. 3 million people in the United States suffer from mitral regurgitation, with more than 250,000 new patients diagnosed each year.

3. The purpose of this study is to evaluate whether mitral valve annuloplasty (MVA) in combination with CABG improves functional capacity, reverses left ventricular (LV) remodelling, and reduces mitral regurgitation severity compared to CABG alone.

4. The study included 60 patients who had moderate FIMR and were referred for CABG. They were randomized to either CABG (Group 1) or CABG plus MVA (Group 2).

5. Several endpoints were measured at baseline and at 1 year: Cardiopulmonary exercise testing, echocardiography, cardiovascular magnetic resonance imaging and plasma BNP levels.

6. After one year, Group 2 showed a greater improvement in peak oxygen consumption as compared to Group 1 (3.0±0.6 ml/kg/min vs. 1.0±0.4 ml/kg/min; P=0.008).

7. Group 2 also had larger decreases in severity than Group 1 in following areas:
   - LV volume decrease 24.4% vs. 10.2%, P=0.05
   - LV sphericity decrease 17.9% vs. 1.7% increase, P=0.01
   - mitral regurgitation severity-volume decrease 69.2% vs. 14.5%, P=0.005

8. Group 2 had significantly lower plasma BNP levels compared to Group 1 (54.8±7.2 pmol/l vs. 108.9±11.4 pmol/l, P=0.001).

9. MVA in combination with CABG in moderate FIMR significantly improves functional capacity, reverses LV remodeling, restores LV geometry, and reduces mitral regurgitation severity compared to CABG alone.

10. Improved patient outcomes with a similar operative mortality in combined CABG and mitral annuloplasty for moderate ischemic MR suggests that a more liberal application of this treatment option may be warranted.

© 2012, American Heart Association. All rights reserved.