Comparison of Mitral Valve Repair and Replacement For Rheumatic Heart Disease
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Objectives: Rheumatic fever is still the main cause of valve disease in developing countries. Mitral valve repair is still controversial in rheumatic patients. Usually these patients are in younger age group and are candidates for mechanical valve replacement as bioprosthetics have limited durability. As per 2014 AHA guidelines noncompliance to anticoagulant therapy in these patients belonging to low socioeconomic strata is a major concern and now the level of evidence for MV repair being 1B favors repair as compared to replacement. In this study retrospective analysis was done comparing outcome of repair and replacement in rheumatic population.

Methods: 693 patients of Rheumatic Heart disease with female preponderance who underwent mitral valve surgery from September 1999 to December 2013 were reviewed retrospectively. All patients were allocated into three groups and results were analyzed as per guidelines on reporting results after valve interventions:

- Group I Mitral valve repair (Repair) 238 (34.34%) patients
- Group II Mitral valve replacement (Mechanical) in 343 (49.50%) patients.
- Group III Mitral valve replacement (Bioprosthetic) 112 (16.16%) patients

Results: Follow up was Repair 81±43, Mechanical109±34, and Bioprosthetic 65±23 months. Patients were in NYHA Class I & II Repair 191, Mechanical 269 and Bioprosthetic 91 while in NYHA II&IV Repair 15, Mechanical 11 and Bioprosthetic 3. Follow up percentage of patients was Repair 90.75%, Mechanical 94.22% and Bioprosthetic 96.91%. Statistical analysis of results was carried out with X2 or Fisher exact test and analysis of variance or the student t test. The outcome parameters results of three groups are described in figure. Early mortality was Repair 4.62%, Mechanical 4.08% and Bioprosthetic 6.25% not significant and is not depicted in figure.

Conclusion: This study concludes that mitral valve repair has excellent durability comparable to mechanical valve replacement in rheumatic disease, therefore, repair appears to be more beneficial than mechanical replacement as this avoids the need for lifelong anticoagulation therapy and the associated risks of bleeding and thromboembolism. The reoperation rate was significantly higher in repair group as compared to mechanical and bioprosthetics. The durability of bioprosthetic valves in the study comparable to repair or mechanical valves may be due to as maximum follow up is only 65 months.