

Mitral Valve Repair in Rheumatic Heart Disease

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Objective: Despite reports of declining incidence, rheumatic mitral valve disease remains significant, comprising 20% of current practice. Recent expansion of repair techniques, including autologous pericardial patching of retracted leaflets and neo-chordal replacement of abnormal submitral structures, might encourage re-examination of rheumatic mitral valve reconstruction. This goal of this study was to document survival after valve repair versus replacement for rheumatic mitral disease over the past 20-years in an effort to guide future therapy.

Methods: From 1986 to 2006, 416 patients underwent isolated mitral procedures for rheumatic disease (+/- CABG). Of this group, a minority (11%; n=47) had mitral valve repair, and most (n=369) received prosthetic valve replacement. Consistent baseline characteristics and procedural details were recorded in a prospective databank throughout the 20 years. Unadjusted survival estimates were generated using Kaplan Meier methods, and a Cox model risk-adjusted survival data for all differences in important baseline characteristics.

Results: Baseline patient characteristics were similar between the two groups (Table), except for minimally invasive approach (9% repair vs 31% replacement; $p < 0.05$). Anatomic valve derangements were less severe in the repair group. Median followup was 13.2 years in the repair group vs 5.4 years after valve replacement. Long term survival was significantly better after valve repair, both for unadjusted ($p < 0.0001$) and risk-adjusted data ($p = 0.008$; HR=1.94) (Figure). Late reoperation at our institution was required in 9 patients for each group, at a median of 6 years for repair and 2.7 years for replacement.

Conclusions: While the sample was small and differences in valve anatomy existed, survival after rheumatic mitral repair has exceeded that of valve replacement. These findings would support efforts to apply autologous valve repair to more patients with rheumatic mitral valve disease.

Characters 1986 (limit = 1950 + 47)

Table

Procedure	Mitral Repair	Mitral Replacement	p-value	.
Number	47	369	-----	
Age (years)	58	57	0.35	
Gender (% female)	72%	81%	0.16	
CABG	19%	18%	0.84	
Diabetes	6%	14%	0.24	
Renal Failure	0%	2%	0.61	
Ejection Fraction	56%	57%	0.44	
CHF III/IV	53%	64%	0.46	
Mitral Stenosis	68%	72%	0.54	
Non-Elective	17%	27%	0.21	.

Figure

