

dictors of long-term mortality were early PVIE (RR = 2.14), comorbidity (RR = 3), CHF (RR = 4.19), and *S aureus* (RR = 2). After a mean 32 months follow-up, only 61 (58%) pts are still alive.

Conclusion:

- 1 - PVIE is still associated with high in-hospital and long-term mortality and needs close follow-up after the initial in-hospital stay.
- 2 - CHF, *S aureus*, severe regurgitation, and complicated PVIE are associated with poor outcome.
- 3 - Half PVIE can be treated without surgery with similar mortality than operated pts.
- 4 - However, surgery during the acute phase is associated with a better outcome in pts with *S aureus* infection and in pts with > 1 prognostic marker. Early surgical therapy is mandatory in these pts.

1010-139 Echocardiographic Characteristics Predictive of Successful Repair in Patients With Isolated Tricuspid Aortic Valve Regurgitation

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Background: There is increasing interest in valve sparing operations for patients with isolated severe aortic regurgitation (AR). Features that are predictive of repair of tricuspid aortic valves with intrinsic cusp pathology are not well defined.

Methods: We reviewed all intraoperative transesophageal echos performed on patients with isolated AR and trileaflet valves undergoing surgery at our institution over a three-year period (2000-2002). Those with evidence of aortic dissection, primary ascending aortic root dilatation and those where endocarditis was the primary etiologic factor were excluded.

Results: We identified 114 patients (Mean age 59±15yrs; 75% male), 39 (34.2%) had isolated aortic cusp prolapse and 73 (64%) had restricted cusp motion as the primary mechanism of AR. Valve repair was performed in 26 (22.8%). Two of these patients had failed repairs requiring valve replacement. Repair was more likely in younger patients, those with leaflet prolapse, less leaflet edge thickening and less commissural calcification. By multivariate analysis, eccentric AR jet direction and less leaflet edge thickening (< 3mm), emerged as independent determinants of likelihood of successful valve repair.

Conclusions: A number of echo features predict valve reparability in patients with trileaflet aortic valves, intrinsic valve pathology and primary isolated AR, with eccentric regurgitant jet direction and less leaflet edge thickness being the most important.

	Repair	Replacement	
Age	50 ± 15	62 ± 14	p = 0.006
Mechanism - Prolapse	66.6%	25.6%	p = 0.002
Mechanism - Central Defect/Restricted leaflet motion	29.1%	70.8%	p = 0.002
Jet Direction - Eccentric	65.2%	29.6%	p = 0.002
Leaflet Edge thickness of < 0.3cm	38.1%	93.5%	p < 0.0001
Commissural Calcium	14.3%	70.3%	p < 0.0001

1010-140 Influence of Surgical Treatment of Atrial Fibrillation on Late Morbi-Mortality After Correction of Mitral Valve Lesions Associated With Chronic Atrial Fibrillation

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Background: Atrial Fibrillation (AF) has been associated with increased morbi-mortality. Surgical treatment has been delivering consistent benefits. We intended to evaluate the benefit, in long term, of the maintenance of the sinus rhythm achieved by surgical treatment of AF associated with mitral valve correction.

Methodology: Retrospective study of 136 patients with chronic AF and mitral valve disease, operated between 1994 and 2002. Sixty-one patients underwent isolated mitral valve surgery, 51 associated with modified Cox procedure and 26 associated with isolation of pulmonary veins (IPV) by an elliptical incision around all their 4 orifices, by single "cut and sew" technique. The mean age was 50±12 years and the average follow up was 49±26 months in isolated mitral valve surgery, 55±26 months on mod-Cox group and 26±10 months on IPV. Death from cardiovascular cause was analyzed, as well as thromboembolism, hemorrhage, arrhythmia and reoperation at late follow-up.

Results: At 24 months of follow up, the rhythm was sinus in 87.5% on IPV, 72.7% on mod-Cox and 23.3% on mitral alone (p<0.001). As for the morbi-mortality, 30 (21.9%) patients had some event: 13.9% of the patients on sinus rhythm and 30.8% on non-sinus (p=0.014). Thrombo-hemorrhagic events occurred in 1.4% of the sinus rhythm patients and in 18.5% of those not in sinus rhythm (p<0.001).

Conclusion: IPV and mod-Cox groups had a larger reversion rate to sinus rhythm at 24 months. Patients on sinus rhythm had less long term thrombo-hemorrhagic events. There is objective benefit expressed in lower morbi-mortality when surgical treatment of AF is added to mitral valve surgery.

POSTER SESSION

1030 Defining the Clinical Outcome in Patients With Valvular Heart Disease

Sunday, March 07, 2004, Noon-2:00 p.m.
Morial Convention Center, Hall G
Presentation Hour: 1:00 p.m.-2:00 p.m.

1030-135 Impact of Wide Pulse Pressure With and Without High Systolic Blood Pressure on Clinical Outcomes in Chronic Severe Aortic Regurgitation

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Background: For over a century, pulse pressure has been recognized as a clinical sign of the severity of aortic regurgitation (AR) but its predictive value remains unclarified. We previously showed that systolic hypertension predicts adverse outcomes among patients (pts) with chronic severe AR. However, the relative prognostic importance of the systolic (SBP), diastolic (DBP), and pulse (SBP-DBP [PP]) pressures is undefined. **Methods:** Therefore, among 64 pts with chronic severe AR (80% male, age at entry: 44±15 yrs, 87% non-rheumatic) who were asymptomatic with normal LV ejection fraction (EF) at rest by radionuclide cineangiography at study entry and were followed 7±4 event-free yrs, we related SBP, DBP and PP, defined during physical exam at study entry, and their interactions, to subsequent cardiac events (CE). **Results:** During followup, 2 pts died suddenly, 15 pts developed heart failure (CHF)±LV dysfunction, and 5 developed LV dysfunction alone. By univariate analysis, both SBP (p=0.009) and PP (p<.02), but not DBP (NS) predicted CE. Multivariate analysis revealed a positive interaction between SBP and PP indicating a synergistic effect on outcomes even when adjusted for age, gender and rheumatic vs nonrheumatic etiology (p<.0002). Thus, pts with both SBP>140 and PP > 82 (N=16) had a 5-fold increased risk of CE (Avg. Annual Risk [AAR]=15.6) vs. pts with SBP>140 and PP<82 (N=9, AAR)=3.2, p<.03; no PP-associated risk was found among the 39 pts with SBP<140 (NS). **Conclusions:** SBP and PP each predict CE risk among asymptomatic pts with severe AR and normal LVEF, irrespective of etiology. Wide PP in the setting of high SBP further concentrates this risk but DBP does not affect risk. Further research must determine the relation of pp to other prognostically important variables and whether currently available therapeutic interventions to lower pp and/or sbp are clinically beneficial in this population.

1030-136 Echocardiographic Presence of Mitral Annular Calcification Predicts Increased Mortality in Patients With Normal Left Ventricular Ejection Fraction

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Mitral annular calcification is frequently noted on echocardiographic examinations, however its prognostic significance is not well defined in patients with normal left ventricular function. We sought to investigate the correlation of echocardiographic mitral annular calcification (MAC) and overall mortality in a large clinical population. We hypothesized that presence and degree of MAC in patients with normal left ventricular ejection fraction does adversely affect mortality.

Methods: 52,129 patients, referred to our institution for echocardiographic examinations were evaluated. MAC was graded as absent, mild (spotty calcification of the annulus), or as marked (extensive circumferential calcium protruding into the mitral annular plane) by qualitative visual analysis. The observation period for mortality rate was 5 years.

Results: Mean age was 60.8 ± 15 years (48% m, 52% f), mean BMI was 29.5 ± 18 kg/cm², mean EF was 61 ± 4 %. MAC was absent in 43,496 patients (83%), was mild in 7625 pts (15%) and was marked in 808 pts (1.55 %). During the observation period overall mortality rate was 6.47 %, was 5.4 % in the absence of MAC, was 11.5 % with mild MAC (ch² = 424, p less than 0.0001), odds ratio (OR) = 2.3 (2.11-2.48), and was 16.34 % with marked MAC (ch² = 181, p less than 0.0001), OR 3.43 (2.83-4.16).

A multivariate logistic regression model revealed MAC (OR = 1.5), age (OR = 1.03), male gender (OR = 0.82) and ejection fraction (OR = 0.96) as significant independent predictors for mortality (ch² = 1053, p less than 0.0001).

Conclusion: Echocardiographic presence and degree of mitral annular calcification in patients with normal left ventricular ejection fraction constitutes a significant independent and the strongest predictor of mortality, when compared with age, male gender, BMI and left ventricular ejection fraction.

1030-137 Clinical Presentation and Outcome of Tricuspid Regurgitation Due to Flail Leaflets

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Background: Tricuspid regurgitation (TR) has the reputation of being well tolerated but most studies have focused on functional TR. Little is known about TR due to organic valve disease particularly regarding prognosis. Tricuspid flail leaflet (FL) is an important causative mechanism of organic TR as it causes uniformly high degree of regurgitation and can be easily diagnosed by 2D-echocardiography.

Methods: We analyzed etiology and clinical outcome of TR due to FL, diagnosed by 2D-echocardiography in 60 patients between 1980 and 2000.