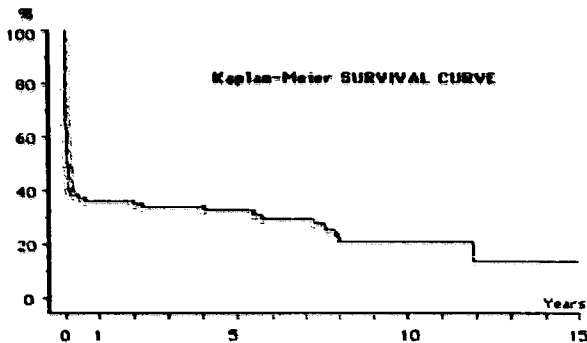


1145-43 Ventricular Septal Defect Following Myocardial Infarction: Good Long Term Prognosis Contrasts With Poor In Hospital Prognosis

E. Bonneloy, P. Chevalier, G. Kirkonan, R. Ronz, L. Olivier, P. Touboul
Hopital cardiologique, Lyon, France

We analyzed the surgical survival rates and the late prognosis of 97 consecutive patients (60 men, 37 women, 69 ± 8 years) who underwent surgery for ventricular septal defect (VSD) in the setting of acute myocardial infarction (MI) between 1981 and 1995. The overall hospital mortality was 61%. The hospital mortality rates were assessed for 3 time windows: 1981-1985 (82% of 23 pts), 86-90 (54% of 35 pts) and 91-95 (52% of 38 pts). Multivariate analysis showed earlier operative year and preoperative shock to be the sole determinants of hospital death. Age and site of MI were not predictive.



The survival rates at 1, 5, 10 and 15 years of those who left alive the hospital (n = 38) were 90%, 82%, 53%, and 35% respectively.

Conclusion: Post MI VSD remains a serious event with a high in-hospital mortality, which was relatively static over the last ten years. However for patients who survive this period, prognosis appears to be good.

1145-44 The Effect of General Anesthesia on Severity of Mitral Regurgitation by Transesophageal Echocardiography

K.S. Grewal, A.R. Pracha, J.C. Astbury, N. Reichel, M.J. Malkowski
Allgheny University of the Health Sciences, Pittsburgh, PA, USA

Mitral regurgitation (MR) is a dynamic valvular lesion altered by loading conditions. To quantitate the effects of general anesthesia on the severity of MR, TEE studies were analyzed in 40 patients (68 ± 9 years) with moderate (45%) or severe (55%) MR on preoperative (PTEE) who underwent intraoperative (OTEE) (mean between studies = 6 ± 7 days). On blinded review, color Doppler jet area (JA) and width at the vena contracta (JV) were measured. Pulmonary venous flow (PVF) Doppler peak systolic to diastolic velocity ratio (S/D) was calculated. Left ventricular end-diastolic diameter (LVEDD) was measured from the transgastric views and mean arterial pressure (MAP) was recorded. The PTEE and OTEE studies were compared by paired Student t-test.

Results: JA, JV and S/D changes with general anesthesia were consistent with significant reduction in the severity of MR with the mean S/D ratio pattern improving from reversed to blunted.

	LVEDD (cm)	MAP ¹ (mmHg)	S/D	JV (cm)
PTEE	5.3 ± 1.0	67 ± 17	0.34 ± 0.9	0.53 ± 0.15
OTEE	4.9 ± 1.0	74 ± 9	0.36 ± 0.9	0.47 ± 0.14
p-value	0.0001	0.0006	0.009	0.007

By color Doppler the jet area decreased in patients without eccentric jets (n = 30; 6.1 ± 3.8 vs. 4.9 ± 3.2 cm²; p = 0.007). Reduction in severity grade was present in 11 (27%) patients. Thus, MR as assessed by color Doppler and PVF decreases significantly during general anesthesia as a result of reduced preload and afterload. OTEE may significantly underestimate the severity of MR and should not be used for deciding whether to perform mitral valve repair or replacement.

1145-45 Post Operative Exercise Tolerance After Aortic Valve Replacement by Small Size Prosthesis

P. Becassis, P. Messner-Pellenc, M. Hayot, J.-M. Frapier, R. Grolleau, J.-M. Davy, C. Prefaut. *Service d'exploration fonctionnelle, Service de chirurgie cardiaque. Hopital A de Villeneuve. Montpellier, France*

Background: The determinants of exercise capacity after mechanical aortic

replacement are not well known. Small valve size selection had been described as an independent predictor factor of exercise tolerance appreciated by exercise duration. The maximal oxygen uptake (VO₂ max) can represent a good evaluation of exercise capacity. The aim of this study was to measure VO₂ max during an exhaustive cycle ergometer exercise in patients after aortic valve replacement by small size prosthesis.

Method: Fourteen patients were eligible, mean age 62 ± 6 years. Before surgery mean left ventricular ejection fraction (LVEF) was 73 ± 8%. Two types of valve, with small diameter (19 to 21 mm), were used: Medtronic Hall and Saint-Jude Medical. A control group (n = 14) paired for age, weight and size was constituted. After one year follow-up, exercise tests were performed.

Results: The exercise capacity was not significantly different between control group and patient group: VO₂ max (21.7 vs. 20.4 ml/kg/min; p = 0.42), work load (115 vs. 93 Watts; p = 0.13) were at the same level. Same results were observed with ventilatory parameters, like minute ventilation, ventilatory reserve and ventilatory equivalent for VO₂ and VCO₂.

Conclusion: Valve replacement by small aortic prosthesis seems not to be a factor of exercise tolerance appreciated by VO₂ max in patients without LVEF dysfunction before surgery.

1145-46 Early and Late Follow-up of Untreated Traumatic Aortic Lesion: A Support to Delayed Surgery

R. Fatton, F. Celletti, P. Bertaccini, G. Napoli, B. Descovich, A. Pierangeli.
University of Bologna, Bologna, Italy

Background: Controversial strategies exist both for diagnosis and treatment of traumatic aortic rupture (TAR). This study analyzes the behaviour of post-traumatic lesions in the subacute phase.

Methods: MRI was used in the acute phase to study 27 patients with chest trauma and suspected TAR.

TAR was present in 21 patients. No one was operated in the acute phase. All patients were treated with β-blockers and vasodilators. Delayed surgery was carried out at 7 ± 2.9 months after the resolution of associated lesions. A scheduled MRI follow-up was performed at 15/30/60/150 days. The parameters examined were: increase of posttraumatic aneurysm, modification of the parietal damage (increase of wall thickness, hemorrhage resolution), increase of periaortic hematoma, modification of associated lesions.

Results: A 2.0 ± 1.5 mm median monthly increase of the aneurysm resulting in a 4.4 ± 2.5 mm increment at the end of the follow-up was observed. In three cases an augmentation of 6, 7 and 13 mm was detected and surgical repair was anticipated. No significant correlation among the increase and type or severity of TAR was noted. In 6 cases a periaortic hematoma surrounding the aortic aneurysm decreased through the time. One case of intimal hemorrah healed spontaneously, with no aneurysm formation. Associated lesions (pleural and pericardial effusions, rib fractures, lung focal contusions and one case of ARDS) resolved in 30-60 days. All patients underwent successful surgical repair and the overall mortality was absent.

Conclusions: Despite the common knowledge considering TAR highly evolutive in the acute and subacute phase, this study demonstrate that this pathological entity is relatively stable if a proper pharmacological treatment is administered. MRI follow-up is recommended in order to detect isolated cases of unstable aneurysm.

1146 Pediatric Cardiology: Coronary Artery Assessment; Exercise Performance

Tuesday, March 31, 1998, 3:00 p.m.-5:00 p.m.
 Georgia World Congress Center, West Exhibit Hall Level
 Presentation Hour: 3:00 p.m.-4:00 p.m.

1146-154 Effect of Pulmonary Artery Stenoses on the Cardiopulmonary Response to Exercise Following Repair of Tetralogy of Fallot

J. Rhodes, A. Dave, M.C. Pulling, R.L. Geggel, Z.M. Hijazi, D.R. Fulton, G.R. Marx. *New England Medical Center, Boston, MA, USA*

Patients who have undergone intracardiac repair of tetralogy of Fallot (TOF) often have diminished exercise capacity and excessively high minute ventilation (V_E) during exercise. The degree of excessive V_E has been found to correlate negatively with peak oxygen consumption (V_{O₂}); however, its cause, and its association with peak V_{O₂}, are not well understood. We hypothesized that the TOF patient's excessive V_E during exercise develops on account ventilation-perfusion mismatch secondary to branch pulmonary artery stenoses. To test this hypothesis, we reviewed the echocardiograms, lung perfusion scans and progressive exercise tests of all patients with TOF who were referred to our pediatric exercise physiology laboratory between 1992 and 1997. Patients with evidence of PA stenoses had lower peak V_{O₂} (25.9 ± 4.1 vs. 34.8

TUESDAY POSTER