Results: Among 561 pts (mean age: 59±17 yrs), Echo revealed a Vg in 487 pts (87%), an Ab in 92 (16%), a Reg in 476 (85%) and a PD in 20 (23%). Site of IE could not be identified precisely in 49 pts (9%). Among the 400 cases for whom TTE and TEE findings could be clearly separated, TEE proved to be more accurate in 238 (60%), yielding an additional identification of a Vg, an Ab, a Perf and a PD in 187 (47%), 55 (14%), and 6 (1%) pts respectively. Among the 264 pts (47%) treated surgically, information on macroscopic findings were available in 224. Comparison between Echo and macroscopic findings were in complete agreement in 126 pts (56%), but differed concerning the diagnosis of Vg in 52 pts (23%), Ab in 29 (13%), Perf in 41 (18%), and PD in 2.

Conclusions: Echo is a powerful tool in patients with SAB, particularly for aortic valve prostheses. Echocardiographic patterns may differ according to responsible micro-organisms. The risk of these complications is particularly relevant when the vegetation size is ≥20 mm.

**Hepatosplenic and Renal Embolisms in Infective Endocarditis**

**Maria Luaces; Mendez, Jose Alberto San Roman, Cristina Fernandez, Javier Lopez, Cecilia Corros, Isidre Vilacosta, Hospital Clinico Universitario San Carlos, Madrid, Spain**

BACKGROUND: As one of the complications of infective endocarditis, embolization has a great impact on prognosis. We assessed the epidemiological, clinical, microbiological, echocardiographic and prognostic features of episodes of infective endocarditis with symptomatic embolisms in the hepatosplenic circulation or the kidney. METHODS: We studied 338 consecutive episodes of left-sided infective endocarditis. Embolisms were documented by abdominal ultrasound and/or computed tomography. RESULTS: There were 40 data sets: 35 with hepatosplenic IE (11:1) and 5 with nephrotic syndrome (1:1). On the logistic regression analysis, vegetation size proved to be an independent factor for the following events: septic shock, persistent infection, renal failure and need for surgery. Crude risk for each of the above events increased according to vegetation size. CONCLUSIONS: Vegetation size in the first TEE predicts the development of septic shock, signs of persistent infection, renal failure, and the need for surgery. The risk of these complications is particularly relevant when the vegetation size is ≥20 mm.

**Prognostic Implications of Vegetation Size at Hospital Admission in Infective Endocarditis**

**Maria Luaces; Mendez, Cristina Sarria, Jose Alberto San Roman, Cristina Fernandez, Javier Lopez, Cecilia Corros, Isidre Vilacosta, Hospital Clinico Universitario San Carlos, Madrid, Spain**

BACKGROUND: The information obtained from echocardiographic in infective endocarditis is employed with prognostic aims. We assessed the hypothesis that vegetation size in the first transesophageal study (TEE) has prognostic implications in the clinical course of infective endocarditis. METHODS: We analyzed 265 consecutive episodes of infective endocarditis with vegetations documented on the first TEE. The relative risk of embolization from the univariate analysis was adjusted by a logistic regression model including the following variables: age, acute or subacute course, underlying heart disease, microbiological origin, valve (native, mechanical, biological), position of the valve and embolisms before institution of correct antibiotic treatment. A cut-off value of vegetation size for risk increase was calculated according to quartile distribution of vegetation size. RESULTS: On the multivariate analysis, vegetation size resulted to be an independent factor for the following events: septic shock, persistent infection, renal failure and need for surgery. Crude risk for each of the above events increased according to vegetation size. CONCLUSIONS: Vegetation size in the first TEE predicts the development of septic shock, signs of persistent infection, renal failure, and the need for surgery.
coccii are more common. 3) Embolisms in other locations are more frequent. 4) Septic shock is more frequent. 5) Death and the need for valve surgery are not influenced by the existence of these embolisms.

| Infarct Location | MR at 8 weeks (0=no MR, 4=severe MR) ETV at 8 weeks as % of preinfarction ESMACR at 8 weeks as % of preinfarction EF at 8 weeks as % of preinfarction |
|------------------|-------------------------------------------------|----------------------------------|----------------------------------|-------------------------------|
| Anterolateral(AA) n=26 | 0.7±0.2 | 23±11** | 86±4 | 76±34 |
| Anterobasal(AB) n=16 | 0.5±0.2 | 20±17 | 75±6 | 75±38 |
| Posterobasal(PB) n=20 | 2.9±0.2** | 21±12 | 74±7 | 73±21 |

* ESV significantly greater for AA infarcts than all other infarct locations at 8 wks
** IMR significantly greater for PB infarcts than all other infarct locations at 8 wks

** ESV significantly greater for AA infarcts than other all infarct locations at 8 wks

438A ABSTRACTS - Valvular Heart Disease

Reoperative Valve Replacement With the St. Jude Medical Valve Prosthesis: Long-Term Follow-Up
Robert W. Emery, Kit V. Arom, Christopher Krogh, Lyle D. Joyce, Demetre Nicoloff, Minnesota Cardiovascular & Thoracic Surgeons, LLC, St. Paul, MN

OBJECTIVE: From 6/78 – 9/02, 451 redo open heart patients (following various primary cardiac operations) age range 18-91 years (average age 62 ± 14) underwent single-valve replacement with the St. Jude Medical (SJM) heart valve. Of 248 patients having aortic (AVR) and 203 patients having mitral valve replacements (MVR), 35% and 21% had concomitant coronary bypass respectively.

METHODS: Cardiac Surgical Associates has maintained an independent database of our patients with the St. Jude Medical valve prosthesis since their first implant in 10/77. Patients were contacted by questionnaire and/or phone from 11/02 through 6/03. Hospital course and valve-related events were verified by patient chart review and/or physician contact.

RESULTS: Follow-up was 95% complete for a total of 3,115 patient years (1,671 AVR; 1,143 MVR). Follow-up ranged from 0.1 to 24.3 years (average 7 ± 6 years). Operative mortality was 9% (10% AVR, 8% MVR). Five deaths (13%) were valve related. Freedom from valve-related events were verified by patient chart review and/or physician contact.

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CONCLUSION: Reoperative valve replacement carries a significant operative mortality, but long term results with the SJM valve show a low event rate, a durable prosthetic valve and excellent long-term patient survival.

1143-140

ORAL CONTRIBUTIONS

851 New Developments in Valvular Heart Surgery: Techniques, Results, and Operative Care
Tuesday, March 09, 2004, 2:00 p.m.-3:30 p.m.
Morial Convention Center, Room 257

851-T Ischemic Mitral Regurgitation Does Not Influence Postinfarction Ventricular Remodeling
Sina L. Moinine, Yoshiharu Emoto, Joseph H. Gorman, III, Benjamin M. Jackson, Theodore Plappert, Martin G. St. John-Sutton, Ahmad Zeeshan, Robert C. Gorman, University of Pennsylvania, Philadelphia, PA

Background: Despite sparse clinical data, surgical treatment for ischemic mitral regurgitation (IMR) has become more aggressive. We used four well-developed ovine models of postinfarction left ventricular (LV) remodeling to test the hypothesis that IMR does not significantly contribute to postinfarction LV remodeling.

Methods: Infarction of 21% to 24% of the LV was induced by coronary ligation in 71 sheep. Infarctions varied only by anatomic location: anterolateral (AA), n=26; anterobasal (AB), n=16; laterobasal (LB), n=9 and posterobasal (PB) n= 20. End systolic volume (ESV), end diastolic volume, end systolic muscle to cavity area ratio (ESMACAR), ejection fraction (EF) and degree of IMR as determined by quantitative echocardiography were assessed before infarction at 2, 5 and 8 weeks after infarction to evaluate the extent of LV remodeling.

Results: All infarcts resulted in significant postinfarction remodeling and decreased EF (table). AA infarcts led to LV aneurysms and resulted in more severe remodeling than the other three infarct locations. Only PB infarcts caused severe and progressive IMR. Remodeling due to PB infarcts was not more severe than that caused by infarcts at other locations.

Conclusion: The extent of postinfarction remodeling is determined by infarct size and location. The development of IMR does not contribute to adverse remodeling. IMR is a manifestation rather than a cause of postinfarction remodeling. The current aggressive surgical approach to IMR should be reassessed.

852 Reduction in Functional Mitral Regurgitation Using the Coapsys Annuloplasty Device in Patients Undergoing Off-Pump Coronary Artery Bypass Grafting: A Quantitative Echo Analysis
Sanjay Mittal, Yogal Mishra, Yatin Mehta, Naresh Trenah, Escorts Heart Institute and Research Centre, New Delhi, India

Background: We are evaluating a novel implantable device (Myocor® Coapsys™ Annuloplasty System) intended to treat functional mitral regurgitation (MR) on a beating heart as conventional surgical correction increases mortality and morbidity over CABG alone. Changes in mitral valve (MV) geometry induced by the device were evaluated using echo techniques.

Methods: The Coapsys device was surgically implanted in 20 patients (mean age 58.7 ± 8.1 years, 3 females, mean ejection fraction 37.3 ± 6.2 %) with sustained MR grade 2 or more after undergoing concomitant CABG. Patients with structural abnormalities of the MV or its apparatus were excluded. Coapsys consists of anterior and posterior epicardial pads connected by a flexible sub-valvular chord. The device is tightened under echo guidance to minimize MR. Echo parameters (MR Grade; Maximum MR jet area; end-diastolic antero-posterior (A-P) annular dimension and MV tenting area) were studied pre-operatively and post-operatively (prior to discharge and 3 months).

Results: Implants were performed off-pump without device related adverse events. Echo parameters were as Table 1. [*p<0.05 compared to pre-implantation]

Table 1

<table>
<thead>
<tr>
<th></th>
<th>Pre-implant</th>
<th>Discharge</th>
<th>Three Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>MR Grade</td>
<td>3.0±0.6</td>
<td>1.1±1.0**</td>
<td>1.3±0.8*</td>
</tr>
<tr>
<td>MR jet area (cm²)</td>
<td>7.9±3.7</td>
<td>3.5±2.0</td>
<td>3.6±1.6*</td>
</tr>
<tr>
<td>Annular A-P Dimension</td>
<td>2.8±0.4</td>
<td>2.4±0.4*</td>
<td>2.6±0.4*</td>
</tr>
<tr>
<td>Mitral Tenting Area</td>
<td>3.9±1.0</td>
<td>2.8±1.0**</td>
<td>2.9±0.9*</td>
</tr>
</tbody>
</table>

Conclusions: The Coapsys device can be safely implanted on the beating heart. Implantation of the device results in significant reductions in MR, MR jet area, A-P dimension, and MV tenting area are also significantly reduced. These functional and geometric changes are maintained at 3-months.

853-3 Staged Initial Percutaneous Coronary Intervention Followed by Valve Surgery (“Hybrid” Approach) for Patients With Complex Coronary and Valve Disease
John G. Byrne, Marza Leacche, Tomislav Mihaljevic, Gary F. Aranki, James D. Rawn, Lawrence H. Cohn, Brigham and Women’s Hospital, Boston, MA

Background: With advancements in percutaneous coronary interventions (PCI), some patients requiring coronary revascularization and valve surgery may be better served with a “hybrid” approach involving initial planned PCI followed by valve surgery in a staged fashion rather than conventional high-risk valve/CABG. This may be particularly relevant in hemodynamically unstable patients after acute coronary syndromes, and some patients requiring valve reoperations.

Methods: We retrospectively analyzed 26 consecutive patients with coronary artery and valve disease who were treated with planned initial PCI followed by valve surgery during the same hospitalization between September 1997 and August 2003.

Results: Median age was 72.5 years (range 53-91 years), with 12/14F. Mean NYHA was 3.5±0.6. Acute myocardial infarction was present in 10/26 (38%) with cardiogenic shock in 4/26 (15%) and low cardiac output syndrome in 6/26 (23%). 7/26 (27%) required preoperative intubation. Balloon angioplasty was performed in every patient (n=26), fol-