reductions in the composite endpoint of death, repeat MI, ischemic target vessel revascularization (TVR), and disabling stroke (3.0% vs. 1.5%, p=0.01), largely due to a decrease in ischemic TVR (2.4% vs. 0.8%, p=0.001). Abciximab also reduced early subacute thrombosis (1.0% vs. 0.1%, p=0.001). Among 1703 pts in the U.S., mean times of hospital D/C in abcix and non-abcix treated pts were 4.9 ± 2.7 days vs. 3.4 ± 3.5 days respectively, p=0.001. In-hospital costs for the 2 groups were $13,900 (no abcix) vs. $13,000 (no abcix). In the first 7 days following hospital D/C, there were no significant differences relative to abcix treatment regarding the composite endpoint (0.5% vs. 0.9%, p=0.61) or its individual elements, nor were differences in major or minor bleeding observed.

Conclusions- Adjunctive abciximab therapy during primary PCI is associated with reduced early adverse ischemic outcomes that may facilitate early hospital D/C and effect cost savings. However, standard times to D/C after PCI are now so short that efforts to turn around care with abciximab were for the most part not feasible, and cost savings were not realized.

9:00 a.m.

871-3 Duration of Cardiopulmonary Bypass and Risk of Perioperative Stroke in Coronary Artery Bypass Surgery Operations

Hannah M. Weinstock, Donald L. Laksy, Cathy G. Rico, Bruce J. Levison, Charles A. Marri, David J. Melenks, Louis R. Caplan, Yvon R. Barbeau, David C. Charlesworth, Felix Hernandez, Gerald T. O'Connor, Beth Israel Deaconess Medical Center, Boston, MA, Northern New England Cardiovascular Disease Study Group, Lebanon, NH

Background: We previously identified patient and disease characteristics associated with risk of stroke following isolated CABG. We hypothesized that duration of cardiopulmonary bypass (CPB) is an independent risk factor for stroke.

Methods: We collected data prospectively from 29,406 consecutive patients undergoing CABG with CPB between 1992 - 2000. Stroke was defined as a new focal neurological deficit lasting >4 hours. Patients were divided into quartiles by duration of CPB. We excluded patients requiring return to CPB and CPB <30 min and >230 min. Direct standardization was used to adjust for pre-operative risk factors.

Results: There were 400 (1.40%) strokes. Risk of stroke was twice as great (2.3% vs. 1.0%) in the highest quartile than in the lowest (p=0.001). This increased risk persisted after adjusting for pre-operative risk factors.

Conclusion: Increasing duration of CPB was significantly associated with risk of stroke, independent of pre-operative risk factors. Possible mechanisms include damage to blood elements, increased embolic burden, and difficulty in separation from CPB.

Table 1: Crude vs. Adjusted Rates of Stroke by Quartile of Cardiopulmonary Bypass Duration

<table>
<thead>
<tr>
<th>Quartiles of Pufftime (min)</th>
<th>Rates of Stroke</th>
<th>Adjusted*</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;70</td>
<td>1.03</td>
<td>1.13</td>
</tr>
<tr>
<td>70-99</td>
<td>1.23</td>
<td>1.26</td>
</tr>
<tr>
<td>100-120</td>
<td>1.50</td>
<td>1.58</td>
</tr>
<tr>
<td>120-320</td>
<td>2.19</td>
<td>2.06</td>
</tr>
</tbody>
</table>

*Adjusted for age, sex, diabetes, vascular disease, renal failure or creatinine >3mg/dl, ejection fraction <40%

9:15 a.m.

871-4 Impact of Coronary Artery Bypass Graft Versus Percutaneous Coronary Intervention With Stent on Disease-Specific Functional Status in Diabetic and Nondiabetic Patients: Results From the SoS Trial

Zeifang Zhang, Kababon M. Mahony, Red H. Isabel, Jean Booth, Fiona Nugent, John A. Spertus. William S. Weintraub, Emory University School of Medicine, Atlanta, GA

Background: Previous results from the SoS trial showed a significant benefit of CABG vs PCI with stent on Seattle Angina Questionnaire (SAQ) scores at 6 and 12 mo. Results from the BARI trial suggested that for patients (pts) with diabetes (DM), CABG yields superior survival relative to PTCA. The influence of DM on SAQ scores as well as whether the relative benefit of CABG vs PCI on SAQ scores applies to DM and non-DM is not known. Methods: The SoS trial randomized 988 pts with multivessel disease from 11/96 to 12/99 to CABG (74 DM and 426 non-DM) or PCI with stent (68 DM and 420 non-DM). We examined the influence of DM on 3 SAQ domains: physical limitation (PL), angina frequency (AF), and quality of life (QOL) at baseline, 6 and 12 mo. as well as whether the relative effect of CABG vs PCI on 6 and 12 mo SAQ scores vary by DM status. SAQ scores range from 0 to 100, higher scores indicate better functioning. All analyses were performed using significant covariates. Results: For DM and non-DM pts, PL, AF and QOL improved significantly after both CABG and PCI at 6 and 12 mo, and CABG showed greater gain compared to PCI for most SAQ domains (Non DM: p=0.01 for 6 mo PL, AF and QOL, p=0.02 for 1 yr PL, AF and QOL p=0.09 for 2yr QOL, DM: p=0.02 for 6 mo AF, p=0.09 for 6 mo PL, p=0.02 for other domains). No DM by treatment interaction for any SAQ domains was found. Conclusion: While pts with DM tended to have lower improvements in PL, CABG appears to confer the same benefits compared to PCI in DM and non-DM pts.

9:15 a.m.

871-5 Lower Preprocedural Hemoglobin Level is Associated With Increased Risk of In-Hospital Mortality Following Percutaneous Coronary Intervention


Background: Recent studies have shown a relationship between anemia and in-hospital mortality in patients undergoing CABG and with acute myocardial infarction (AMI). The prognostic implication of anemia in patients undergoing percutaneous coronary intervention (PCI) is unknown. We evaluated the relationship between pre-procedural hemoglobin (Hgb) level and PCI mortality in a quality controlled regional database.

Methods: Clinical, procedural, and outcome data on 26,913 consecutive PCI pts were prospectively enrolled in a consortium of 9 hospitals. Pre-procedural Hgb levels were available for 93.3% of pts. Patients were divided into quintiles based on pre-procedural Hgb level (group Q1:6-12, Q2:12-13.5, Q3:13.5-14.4, Q4:14.5-15.4, Q5:15.4-20.1). The primary endpoint was in-hospital mortality.

Results: In-hospital mortality rate was significantly higher in Q1 when compared to other quintiles (TABLE 2 OR, 2.45 9.60 p=0.0001). After adjustment for comorbidities, Q1 remained an independent predictor of in-hospital mortality (adjusted OR 1.37, 95% CI 1.17-1.7, p=0.02). Analysis of patients undergoing PCI > 24 hours of AMI revealed a higher mortality rate in Q1 and Q2 when compared with Q3-Q5 (p=0.05) (TABLE).

Conclusions: Lower pre-procedural Hgb levels are associated with higher in-hospital mortality following PCI, particularly in patients within 24 hours of AMI. Whether optimization of Hgb levels prior to PCI may be of clinical benefit remains to be determined.

9:30 a.m.

871-7 Hospital Percutaneous Coronary Intervention Volume and Patient Mortality: Is the ACC/AHA Volume Minimum Appropriate?

A. Spertus, William S. Weintraub, Emory University School of Medicine, Atlanta, GA

Background: To minimize mortality, current ACC/AHA guidelines recommend hospitals offering percutaneous coronary interventions (PCIs) perform at least 400 PCIs annually. The appropriateness of this threshold to contemporary practice is unknown.

Methods: We used data from the Agency for Healthcare Research and Quality 1999 Nationwide Inpatient Sample, an administrative database of all discharges from a random sample of US hospitals, to assess the association between hospital PCI volume and in-hospital mortality. The sample included as PCI recipients ages 15 years or older, in 214 hospitals in 22 states (n=115,910). Hospitals were grouped by annual PCI volume: low (5-199), medium (200-999), high (1000-9999), and very high (≥10,000, ≥25). We reanalyzed the crude association between hospital PCI volume and in-hospital mortality using chi-square tests. Multivariate logistic regression with generalized estimating equations was used to evaluate the independent association between PCI volume

9:45 a.m.