Emergent Angioplasty for Acute Myocardial Infarction at a Community Hospital Without On-Site Cardiac Surgery


Background: Percutaneous coronary intervention (PCI) for acute myocardial infarction (AMI) at hospitals without on-site cardiac surgery (CABG) remains controversial. We studied the safety and efficacy of PCI performed for AMI at Immam Ali Smal's Hospital (ISJ), with no on-site CABG, with our affiliate, St. Mary's Hospital (SMH), the nearest center (63 miles away) with on-site CABG.

Methods and Results: ISJ and SMH are linked by a 73 telemedicine line to enable on site consultation with cardiology and surgical staff at SMH. We compared the results of emergent PCI for AMI (defined as >90 minute blood pressure drop with no PCI or >30 minute blood pressure drop with PCI) at 3/5/01 to 6/31 at ISJ (n=94) with matched controls at SMH. Multiple logistic regression analysis developed a propensity score based on clinical and angiographic variables. The two groups were balanced for age, ST-segment elevation, anterior infarct, gender, prior revascularization, congestive heart failure, hypertension, smoking status, and renal or peripheral vascular disease. The in-hospital outcomes were similar in the two groups (see Table). No patient required urgent CABG due to procedural related complications.

Conclusion: Our initial experience of emergent PCI for AMI utilizing telemedicine at a community hospital without on-site CABG is favorable, and the results are comparable to those at a tertiary facility with on-site CABG. These data support the new ACC/AHA Guidelines for PCI at a center without on-site CABG.

<table>
<thead>
<tr>
<th>Variable</th>
<th>ISJ Hospital N=94 (%)</th>
<th>Saint Mary's Hospital N=94(%)</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, yr</td>
<td>63.1+12.3</td>
<td>62.9+11.8</td>
<td>0.91</td>
</tr>
<tr>
<td>Male</td>
<td>72(77)</td>
<td>67(71)</td>
<td>0.41</td>
</tr>
<tr>
<td>ST-elevation MI</td>
<td>67(71)</td>
<td>67(71)</td>
<td>1.0</td>
</tr>
<tr>
<td>Anterior MI</td>
<td>18(19)</td>
<td>18(19)</td>
<td>1.0</td>
</tr>
<tr>
<td>Procedural success</td>
<td>88(94)</td>
<td>90(96)</td>
<td>0.52</td>
</tr>
<tr>
<td>In-hospital death</td>
<td>3(33)</td>
<td>2(22)</td>
<td>0.65</td>
</tr>
<tr>
<td>CABG=24 hours</td>
<td>0(0)</td>
<td>0(0)</td>
<td>NS</td>
</tr>
<tr>
<td>In-hospital death, QMI, CABG</td>
<td>4(4)</td>
<td>3(3)</td>
<td>0.70</td>
</tr>
</tbody>
</table>

Prevention of Clinical Events and Restenosis After Percutaneous Transluminal Coronary Angioplasty With Trapidil: Results of the STARC II Study

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Background: Still 30-40% of pts have a significant degree of restenosis after PTCA even in the stent era. Trapidil (T), a drug with antiplatelet and antiproliferative activity (pleatlet-derived growth factor antagonist) was shown to prevent post-PTCA restenosis in humans. STARC II study, showed a significant reduction in restenosis rate (T vs 30.7% (P<0.01).

Methods: To confirm these data, STARC II study tested a 6-month administration of T in 933 pts undergoing elective PTCA (200 mg tid vs placebo (P) on top of ASA), on the 1-year combined end-point of death, reinfarction and need for repeat revascularization. The study was randomized, multicenter, double-blind. A subgroup of 30% pts was also randomized to repeat coronary angiography (CA) at 6 months with central reading.

Results. Baseline clinical and angiographic characteristics were similar in the two study groups. Stent was implanted in 57% of the pts. Primary end-point occurred in 16.0% of P, and in 26.4% of T (p<0.01). When recurrence or worsening of angina was occurring further clinical end-point, this summed up to 23.0% in P vs 27.7% in T group (p<0.12).

Conclusion. T seems not to influence clinical outcome of pts treated with elective balloon PTCA with/without stenting. Angiographic data suggest a possible favorable effect on restenosis only in pts treated with balloon PTCA alone.

Safety Profile of Glycoprotein lib/Ilia Inhibitors in Octogenarians


Background: Patients ≥ 80 years-old constitute a growing population with CAD who have higher complication rates during percutaneous interventions (PCI). While glycoprotein lib/Ilia inhibitors (GPI) are increasingly utilized to reduce the incidence of ischemic complications after PCI, there is limited data regarding the use of GPI in this group, especially with respect to the risk of intracranial hemorrhage. We looked at the safety profile of GPI in a cohort of octo- & nonagenarians undergoing PCI. Methods: All consecutive pts ≥ 80 years-old undergoing PCI with or without a GPI at William Beaumont Hospital during the period of January 1998 and June 2001 were evaluated for clinical outcomes and bleeding complications. Results: 1392 consecutive pts ≥ 80 years-old undergoing PCI with a GPI (n=459) and without a GPI (n=933). Patients treated with a GPI were more likely to be male (57% vs 48%) but less likely to have peripheral vascular disease (15% vs 29%). However, there were no baseline differences between the 2 groups with respect to age (≥75 years), hypertension (71% vs 75%), diabetes (26% vs 27%), stroke, heart failure, heart disease, hypertensive, and creatinine. Bleeding & transfusion rates are shown in the table below. Conclusion: Even though patients ≥ 80 years-old treated with Glycoprotein lib/Ilia receptor inhibitors have more minor bleeding, there is no increased risk of major bleeding requiring transfusions or intracranial hemorrhage. GPI appear to be safe in octo- & nonagenarians undergoing PCI.

<table>
<thead>
<tr>
<th>Variable</th>
<th>GPI n=459</th>
<th>NO GPI n=933</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hematoma</td>
<td>18%</td>
<td>13%</td>
<td>0.02</td>
</tr>
<tr>
<td>G/U bleed</td>
<td>10%</td>
<td>10%</td>
<td>0.604</td>
</tr>
<tr>
<td>CNS bleed</td>
<td>0%</td>
<td>0%</td>
<td>NS</td>
</tr>
<tr>
<td>Transfusion</td>
<td>10%</td>
<td>9%</td>
<td>NS</td>
</tr>
<tr>
<td>Transfused Unit per Bleed</td>
<td>2.3</td>
<td>2.2</td>
<td>NS</td>
</tr>
<tr>
<td>Hospitalization length (days)</td>
<td>4.6-4.6</td>
<td>4.5-4.6</td>
<td>NS</td>
</tr>
<tr>
<td>Death</td>
<td>3%</td>
<td>2.6%</td>
<td>NS</td>
</tr>
</tbody>
</table>

Mortality After Percutaneous Coronary Intervention in Cardiogenic Shock: A Predictive Model Based on 1,869 Consecutive Patients in the ACC-NCDR Registry


Background: Although percutaneous coronary intervention (PCI) in the setting of cardiogenic shock (C-SHOCK) has high in-hospital mortality, the identity and relative importance of variables predictive of in-hospital death remain controversial.

Methods: Accordingly, we queried the 100,000-plus patient ACC-NCDR registry collected in 1998-2000 and evaluated the procedures in 1,869 consecutive patients undergoing PCI for C-SHOCK.

Results: The mean age was 66.13 years with males predominating (62%), 81% underwent PCI for urgent/emergent indication and 54% had ongoing nstangia. The mean LVEF in 1,149 patients with concurrent LV gams was 39%±17, PCI was performed on C-type lesions in 40% and B2 lesions in 37%. Stents were placed in 71%, PCI at multiple...