Methods: Data on hospitalizations for STEMI from 2000 through 2010 were extracted from hospital discharge record databases from all hospitals in Lombardia (a Northern Italy region with high density population). Main outcome measures were in-hospital mortality and treatment modality by sex. Treatment modalities included medical therapy alone or an invasive approach, the latter consisting of coronary angiography alone, percutaneous coronary intervention (PCI), or coronary artery bypass graft surgery. A variable logistic regression was performed to assess the impact of female sex and of treatment modality on mortality after adjusting for age, and comorbidities.

Results: A total of 92807 patients with STEMI, 66.4% men and 33.6% women were enrolled. Women were older than men (mean 75.1 yrs vs 64.1 yrs, \(p<0.001\)) and had a higher prevalence of chronic renal failure (\(p<0.001\)). In-hospital mortality presented a small decrease from 7.5% in 2000 to 6.3% in 2010 among men, while it remained higher and substantially constant over time among women (16.4% in 2000, 16.2% in 2010). The use of an invasive approach increased over time in both sexes (from 52% in 2000 to 91% in 2010 in men and from 36% in 2000 to 70% in 2010 in women). The use of PCI increased from 32% in 2000 to 82% in 2010 in men; and from 21% in 2000 to 57% in 2010 in women. At multivariable regression, an invasive approach (odds ratio (OR) 0.23, 95% confidence interval (CI), 0.21-0.25, \(p<0.001\)) was associated with a significant reduction in mortality, while female sex was not a predictor of mortality (OR 0.96, \(p=0.18\)).

Conclusions: In-hospital mortality remains higher in women than in men, although female sex is not a significant predictor of mortality. Despite temporal increases in the use of an invasive approach, women are more often treated conservatively.

TCT-246


Efthymios Deliargyris1, Debra Bernstein2, Sorin Brener3, Philippe Genereux4, AMI Trial Research Foundation, NY, NY

Use of an invasive approach, women are more often treated conservatively.

Conclusions: The impact of rheolytic thrombectomy (RT) in comparison to manual thrombus aspiration (MTA) on extension of microvascular obstruction (MVO) and infarct size (IS) was assessed in a 1-year follow-up (LV) volumes and ejection fraction (EF) by cardiac magnetic resonance imaging (MRI).

Methods: Eighty STEMI patients (\(<6\) hours from symptom onset) reperfused by primary angioplasty with routine abciximab therapy were randomly allocated (1:1) to a RT or MTA group. RT was performed within \(\pm 6\) days in 37 patients (19 RT, 18 MTA), and after 1 year in 19 patients (9 RT). IS and MVO were measured at 15 min after gadofoxin injection with late enhancement sequences and were analyzed quantitatively (as percentage of the left ventricular mass -gr/LV mass) at a core laboratory blinded to randomized.

Results: Baseline clinical characteristics were similar between the RT and MTA groups, as well as baseline TIMI thrombus grade (4.47 \(\pm 0.84\) vs. 4.67 \(\pm 0.76\), \(p=0.453\)). After thrombectomy, in RT compared with MTA group the thrombus grade decreased to 1.11 \(\pm 1.04\) vs. 2.17 \(\pm 1.29\) \(p=0.004\). At 1-year follow-up, the degree of IS did not change [RT 13.2% (6.4-22.1) vs. MTA 11.4% (6.5-27.8), \(p=0.253\)] and the recovery (baseline-1-year) of LV EF was not different in both groups (RT 9.4\% vs. MTA 11.1\%, \(p=0.620\)). The rate of in-hospital mortality in both groups was similar (RT 1.9\% vs. MTA 1.0\% \(p=0.16\)). In-hospital mortality presented a significant reduction (\(p<0.001\)) in RT compared to MTA groups with a trend towards a lower incidence of MVO was observed (16% vs. 44%, \(p=0.056\)) at 1-year follow-up.

Conclusions: In setting of STEMI at 1-year RT in comparison to MTA did not reduce significantly the IS. However a more favorable change of LV volumes was found, likely due to a more effective thrombus removal and a lower incidence of MVO by RT.

TCT-247

Immediate Stenting in Comparison with Surgical Revascularization Strategy in Patients with Non-ST Elevation Acute Coronary Syndrome and Multivessel Coronary Artery Disease - The MILESTONE Registry.

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Background: The optimal revascularization strategy in patients with multivessel and left main coronary artery disease (MVD, LMD) presenting with non-ST acute coronary syndrome (NSTE-ACS) is undefined.

Methods: In this multicenter, prospective registry, 4566 patients with non-ST elevation myocardial infarction (STEMI), unstable angina and MVD including LMD were enrolled. Following angiography, 3033 patients were assigned for stenting (10.3% DES), whereas 1533 for CABG. The complete follow-up on mortality was obtained at 3 years.

Results: In the overall population, patients assigned for PCI were younger (64.6\(\pm 10\) vs. 65.2\(\pm 9\), \(p=0.03\)) more frequently presented with NSTE-ACS (32.0 vs. 14.5%, \(p=0.01\)), cardiogenic shock (1.5 vs. 0.7%, \(p=0.01\)) history of prior PCI (13.1 vs. 5.5%, \(p=0.01\)) and CABG (10.6 vs. 4.6%, \(p=0.01\)). The Euroscore and TIMI risk score were slightly higher in PCI patients (5.36\(\pm 2.3\) vs. 2.8\(\pm 1.0\)) and 3.71\(\pm 1.0\) vs. 2.0\(\pm 1.0\), respectively; \(p=0.003\). Conversely, patients assigned to CABG more often presented with triple and LMD (82.2 vs. 33.8% and 13.7 vs. 24.0%, \(p=0.01\)). Otherwise, proximal LAD was more often stented (21.5 vs. 11.1%, \(p=0.01\)) after adjustment 992 well-matched pairs were selected. Early mortality was lower after PCI prior to matching (1.1 vs. 1.0%, \(p=0.01\)) whereas after balancing no difference was found (2.5 vs. 2.8%, \(p=0.62\)). Three year survival was in favor of PCI when compared to surgery prior (87.5 vs. 82.8%, HR 1.44, 95% CI: 1.2-1.7) and after matching (86.4 vs. 82.4%, HR 1.33, 95% CI:0.51-1.7 and \(p=0.01\)). Stenting was associated with

Table. Actuarial daily ischemic risk (ADIR) in 3 successive periods after index hospitalization for STEMI

<table>
<thead>
<tr>
<th>ENDPOINT</th>
<th>Index hospitalization</th>
<th>Discharge to 30 Days</th>
<th>30 Days to 1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-cause death</td>
<td>78/21510 (0.362%)</td>
<td>22/10497 (0.211%)</td>
<td>59/122079 (0.0048%)</td>
</tr>
<tr>
<td>CV death</td>
<td>71/21510 (0.330%)</td>
<td>17/10497 (0.163%)</td>
<td>29/122079 (0.0024%)</td>
</tr>
<tr>
<td>Non-CV death</td>
<td>7/21510 (0.0325%)</td>
<td>5/10497 (0.048%)</td>
<td>30/122079 (0.0025%)</td>
</tr>
<tr>
<td>Re-infarct (MI)</td>
<td>44/21510 (0.204%)</td>
<td>27/10497 (0.252%)</td>
<td>84/122079 (0.0069%)</td>
</tr>
<tr>
<td>Definite ST</td>
<td>7/21510 (0.0333%)</td>
<td>17/10497 (0.163%)</td>
<td>0/122079 (0.0000%)</td>
</tr>
<tr>
<td>coronary artery lumen stenosis (\geq 50%)</td>
<td>131/21510 (0.610%)</td>
<td>61/10497 (0.583%)</td>
<td>112/122079 (0.0093%)</td>
</tr>
</tbody>
</table>
| Trend p-values | <0.0001 for all endpoints. All pairwise p-values = 0.0001, except p=0.16 for Group 2 vs. Group 3 non-CV death.

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