**The effect of PCI and post procedural TIMI flow on patients with late arrival STEMI**

M. Tarabih, T. Ovdat, B. Karkabi, A. Eitan, B. Maguli, M. Mahamid, A. Shiran

1Lady Davis Carmel Medical Center, Department of Cardiology, Haifa, Israel
2Sheba Medical Center, The Israel Center for Cardiovascular Research, Tel Aviv, Israel
3The Ruth and Bruce Rappaport Faculty of Medicine, Technion, Israel Institute of Technology, Haifa, Israel
4Hillel Yaffe Medical Center, Department of Cardiology, Hadera, Israel
5Haemek Medical Center, Department of Cardiology, Afula, Israel

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**Introduction:** Patients with ST-elevation myocardial infarction (STEMI) and late arrival (>12h) may have worse outcome following percutaneous coronary intervention (PCI). A worse TIMI flow after PCI is associated with poor outcome. Our aim was to compare the TIMI flow after PCI and to find its effect on outcomes in patients with late-arrival STEMI compared with that of patients presenting early (<12h).

**Methods:** Data source was available for patients enrolled in the biennial acute coronary syndrome Israeli Surveys (ACSIS) during 2000-2021. TIMI flow data was reviewed in patients with late arrival STEMI (12-48h and >48h) who underwent PCI. We analyzed its effect on clinical outcomes in patients with late-arrival STEMI compared with that of patients presenting early (<12h).

**Results:** Available data regarding the time from symptom onset to hospital arrival was available in 6,466 patients with STEMI. Data regarding TIMI flow following primary PCI was available in 2,437/6466 (38%) patients. Pre procedural TIMI-0 flow in the infarct related artery (IRA) was present in 59% of patients, irrespective of time of presentation (Figure). The rate of TIMI-3 flow following PCI was similar in all groups, 89% in patients arriving 12-48h, 96% in those arriving >48h after symptoms onset and 92% in patients presenting within 12h (p=0.632). Most importantly, PCI significantly reduced the rate of 30 days MACE only in those arriving less than 12 hour from symptoms onset (Table).

**Conclusions:** In patients participating in the Israeli ACSIS registry, TIMI-3 flow after primary PCI was achievable in most STEMI patients, but PCI improved the outcome only in those arriving less than 12hour.

**Figure**

![TIMI grade flow before procedure](image1)

![TIMI grade flow after procedure](image2)
<table>
<thead>
<tr>
<th></th>
<th>&lt;12h n=5,646</th>
<th>12-48h n=622</th>
<th>&gt;48h n=198</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO YES P value</td>
<td>NO YES P value</td>
<td>NO YES P value</td>
</tr>
<tr>
<td>PCI</td>
<td>N</td>
<td></td>
<td></td>
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<tr>
<td>MACE</td>
<td>82 (16.9) 500 (11.2) &lt;0.001</td>
<td>15 (17.6) 54 (13.1) 0.348</td>
<td>11 (28.9) 28 (22.8) 0.575</td>
</tr>
<tr>
<td>1-year mortality</td>
<td>46 (9.6) 258 (5.9) 0.002</td>
<td>8 (9.5) 28 (6.9) 0.533</td>
<td>3 (8.1) 11 (8.9) 1.00</td>
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