Background: Cardiovascular disease (CVD) is one of the leading causes of mortality around the world and in India as well. Atherosclerosis is the underlying cause in most of the cases. There are several modifiable (hypertension, diabetes mellitus, dyslipidemia, smoking, tobacco use, obesity and sedentary lifestyle) and non-modifiable (age, gender, family history of premature CVD, race, postmenopausal status) risk factors. The risk in Indians is around 3 to 4 times higher than in western countries, and also CVD occurs 5 to 10 years earlier in Indians compared to western counterparts. The prevalence of diabetes mellitus in India is also one of the highest in the world and diabetes is the major risk factor among males. Diabetes, dyslipidemia and postmenopausal state were the commonest risk factors among females. 94% of the females were postmenopausal.

Methods: We analysed the clinical profile and in-hospital outcomes of 400 patients who presented with acute ST elevation myocardial infarction (STEMI) in a tertiary care centre in rural southern India.

Results: — Majority of the patients were from the age group 51 to 60 years, followed by age group 30 to 40 years. MI in the age group 21 to 30 yrs was 3% and above 71 yrs was 2%.
— Incidence of MI was more in males up to 50 years of age.
— Women predominated men in incidence of MI after 50 years of age.
— Alcohol consumption and smoking were the major risk factors at 40% and 39% respectively, followed by diabetes mellitus at 37% and dyslipidemia at 34%.
— 18% of the patients had no risk factors.
— Smoking, alcohol consumption, systemic hypertension and diabetes were the major risk factors among males. Diabetes, dyslipidemia and postmenopausal state were the commonest risk factors among females. 94% of the females were postmenopausal.
— There were no smokers or alcoholics among females.
— Incidence of diabetes was more in females compared to males, 47% versus 35%.
— Chest pain was the predominant symptom, with 98% of the patients suffering from it, followed by sweating (45%) and shortness of breath (43%).
— Only 15% of the cases reached the hospital within the golden hour.
— 50% of the cases reached the hospital beyond the golden hour but within 6hrs.
— 14% of the cases took more than 6 hours to seek medical help.
— Men presented to the hospital earlier than women,16% versus 10% presented within the golden hour, 55% of men and 53% of women presented within 1 to 6 hrs.
— Anterior wall myocardial infarction (AWMI) was predominated at 49 % followed by Inferior wall myocardial infarction (IMI) at 39%.
— 21.56% of IMWI had Right ventricular infarction (RVI), 2.6% of IMWI had posterior wall myocardial infarction (PWMI).
— AWMI predominated among diabetics, 65% versus 51% among non diabetics.
— 4% of cases developed cardiogenic shock, 5% developed Ventricular tachycardia (VT), 3% developed pulmonary oedema, 2% each developed mitral regurgitation (MR), complete heart block (CHB), and ventricular septal rupture (VSR).
— Complication rates were high among patients with IMWI+RVI: 27% cardiogenic shock, 18% death and 9% conduction block, none of the patients with pure IMWI developed cardiogenic shock, however 2.6% developed conduction block.
— There was no mortality among patients with pure IMWI.
— Complication rates in AWMI: 8% Shock, 10% death 77% of AWMI developed conduction block compared to 2% of IMWI developed VSR.
— Accelerated idioventricular rhythm (AVR) developed in 6% of patients post thrombolysis.
— Mortality rate among females was 21% and males was 5%.
— Overall the mortality rate was 8%.
— 82% received thrombolytic therapy. All patients were thrombolysed with streptokinase. 4.8% of patients developed hypotension during thrombolysis which was managed with dopamine and dobutamine.
— ST segment elevation reduced more than 50%, 90minutes after thrombolytic therapy in 72% of patients and ST segment normalized to baseline in 18% of patients.
— Mortality rate in AWMI was 10.7% and IMWI + RVI was 18%.

Conclusion: Mortality rate was higher in patients with IMWI + RVI. Only 15% reached the hospital within golden hour, more than half of the patients presented within 6 hours and men sought medical help earlier than women. Outcomes were favourable when patients received early thrombolytic therapy and those who presented within the golden hour had better resolution of symptoms and ECG changes post thrombolysis. Streptokinase is still a good and economical thrombolytic agent.

Impact of Periprocedural Glycoprotein IIb/IIIa Inhibitor Receptors on TIMI Flow and 1 Month Major Clinical Outcomes Following Primary Percutaneous Coronary Intervention in Diabetic Patients

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Background: Glycoprotein (Gp) IIb/IIIa receptor inhibitors are known to reduce mortality, target vessel revascularization but not re-infarction in ST elevation myocardial infarction (STEMI) patients. We investigated the impact of Gp IIb/IIIa inhibitor receptor on re-infarction in the post procedure TIMI flow and 1 month major clinical outcomes in diabetic STEMI patients undergoing primary percutaneous coronary intervention (PCI).

Methods: Total of 1562 diabetic STEMI patients undergoing primary PCI with or without periprocedural Gp IIb/IIIa receptor inhibitor coverage were identified from Korean AMI registry (KAMIR). Among 1562 patients, 1107 patients didn’t receive periprocedural Gp IIb/IIIa receptor inhibitors and 355 patients received.

Results: Baseline characteristics were balanced between the two groups except for gender and the incidence of ischemic heart disease. There was no significant impact of Gp IIb/IIIa receptor inhibitor on the post procedure TIMI flow and 1 month major clinical outcomes (Table). Among no Gp IIb/IIIa receptor inhibitor usage patients, 80.3% achieved TIMI III flow and 81.6% in the Gp IIb/IIIa receptor inhibitor usage.

Conclusion: Although the Gp IIb/IIIa receptor inhibitor is known to reduce mortality and target vessel revascularization in STEMI patients, there was no statistically significant impact for development of post procedural TIMI flow and 1 month major clinical outcomes in diabetic STEMI patients undergoing primary PCI.

Impact of Gp IIb/IIIa inhibitor on post proccedural TIMI flow and 1 month major clinical outcomes in diabetic STEMI patients undergoing primary PCI.

<table>
<thead>
<tr>
<th>Variable</th>
<th>No Gp IIb/IIIa Use</th>
<th>Gp IIb/IIIa Use</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>post TIMI grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TIMI 0</td>
<td>9.1(2.0)</td>
<td>9.1(2.0)</td>
<td>ns</td>
</tr>
<tr>
<td>TIMI 1</td>
<td>5.0(0.7)</td>
<td>3.9(0.6)</td>
<td>0.75</td>
</tr>
<tr>
<td>TIMI 2</td>
<td>38(5.9)</td>
<td>22(5.0)</td>
<td>0.79</td>
</tr>
<tr>
<td>TIMI 3</td>
<td>579(80.3)</td>
<td>295(85.8)</td>
<td>0.21</td>
</tr>
</tbody>
</table>

Table: Impact of Gp IIb/IIIa inhibitor on post procedural TIMI flow and 1 month major clinical outcomes in diabetic STEMI patients undergoing primary PCI.