902-34 Intense Metabolic Control Decreases Long-Term Mortality and Morbidity in Diabetics With Myocardial Infarction

K. Måleneberg, L. Rydén, for the Swedish DIGAMI Study Group. Cardiology Department, Karolinska Hospital, Stockholm, Sweden

Diabetic pat with acute myocardial infarction (AMI) has a poor prognosis. Recent data indicate that glycemic control predicts cardiovascular morbidity and mortality in non-insulin dependent.

Material and methods: We tested insulin-glucose infusion as soon as possible after onset of AMI followed by long-term multi dose insulin in a prospective randomised study (DIGAMI) recruiting 620 diabetic pat with AMI. Half of the pat served as a control group (CG) while the remaining subjects constituted an insulin treated group (IG). Data are from one year of follow up.

Results: One year mortality decreased from 26% in the CG to 19% in the IG (p < 0.05). The effect was most pronounced in diabetics without previous insulin and at low cardiovascular risk (reduction = 52%; < 0.02). The most frequent cause of mortality was congestive heart failure (CHF), Cardiovascular mortality (CHF, fatal reinfarction, sudden death, stroke) tended to be more frequent in the IG. The two groups did differ as regards need for revascularisation or hospital care during the year of follow up. Reinfarction was 53 (28% fatal) in the IG vs 55 (45% fatal) in CG (NS). In a multivariate analysis age, previous CHF, admission blood glucose and previous insulin therapy independently predicted one year mortality. Metabolic control at admission predicted mortality in CG but not in IG. Concomitant beta blockade was a predictor for survival among CG whereas thrombolysis was most efficient in IG.

Conclusion: Fatal reinfarction and CHF contribute to the increased mortality in diabetic pat with AMI. Intensive metabolic control by means of insulin lowers mortality and morbidity. Beta blockade did not exert further benefits in insulin treated pat indicating similar mechanisms of action.

902-35 Effect of Lisinopril Treatment on Early Mortality in Patients With Acute Myocardial Infarction at Different Risk Profile: Data From the GISSI-3 Study

GISSI-3 Investigators. M. Negri Institute and ANMCO, Italy

GISSI-3, ISIS-4, and CCS-1 trials showed a mortality reduction with an early (within 24-36 h) treatment with ACE-inhibitors (ACE-i) of unselected pts with AMI. In these trials a significant reduction in mortality was already evident in the first 5 days of treatment. In pts enrolled in the GISSI-3 study, we evaluated early (0 to 5 days) mortality in lisinopril (L) and no-lisinopril (n-L) treated pts, split by subgroups at different baseline risk.

0-5 days mortality % L n-L Reduction % Livesaved x 1000

Overall (n.19318) 3.3 3.8 -13.1 5
Kllip 1 (n.18833) 2.5 2.9 -13.6 4
Kllip 2 + 3 (n.2736) 8.3 9.5 -12.6 12
Anterior Ml (n.5168) 2.5 3.4 -30.5 9
Infarct Ml (n.6105) 1.1 1.8 -31.2 5

The trend in early mortality reduction was consistent in all subgroups at different risk profile, with a greater absolute benefit in the subgroups at higher risk. Analyzing the time course of the L effect split by Killip class at entry, an early benefit from L treatment was observed either in patients in Killip class 1 or in those in Killip class 2 or 3. From day 6 to 42, no further benefit could be seen in pts in Killip class 1, while Killip class 2 or 3 pts showed, as expected, a further late mortality reduction (18 lives saved per 1000), being these patients similar to those randomized in the AIRE study. These findings support an early treatment with ACE-I of relatively unselected pts with MI and its continuation for a long period of time only in those with post-AMI left ventricular failure and/or dysfunction. Further investigations are needed to explain the mechanisms underlying the early benefit, which appears different from and complementary to the favourable modifications of ventricular remodelling induced by ACE-I.

902-36 Effects on Ventricular Arrhythmias of an Early Lisinopril Treatment In Patients With Acute Myocardial Infarction: The GISSI-3 Experience

Aldo P. Maggioni, Fabrizio Pizzetti, Eugenio Santoro, Roberto Latini, Giulio Zuanetti, Maria Grazia Franzosi, on behalf of the GISSI-3 Investigators. ANMCO and M. Negri Institute, Italy

The activation of renin-angiotensin-aldosterone system after myocardial infarction (MI) can increase frequency and complexity of ventricular arrhythmias (VA) after MI. The effects of a lisinopril (L) treatment, started in GISSI-3 study within 24 h from symptom onset, was evaluated on (a) life-threatening VA in the 18958 pts with complete in-hospital data and (b) VA profile in the 12327 pts with pre-discharge 24 h ECG monitoring data available.

The rate of pts with in-hospital life-threatening VA and with VA at predischARGE 24 hour ECG monitoring in the L and n-L groups is reported in the table:

<table>
<thead>
<tr>
<th>In-Hospital VA</th>
<th>Lisinopril (n.9435)</th>
<th>No-Lisinopril (n.9460)</th>
<th>2p</th>
</tr>
</thead>
<tbody>
<tr>
<td>VF %</td>
<td>2.5</td>
<td>2.7</td>
<td>NS</td>
</tr>
<tr>
<td>sVT %</td>
<td>1.9</td>
<td>2.4</td>
<td>0.03</td>
</tr>
<tr>
<td>VF and/or sVT</td>
<td>4.0</td>
<td>4.7</td>
<td>0.01</td>
</tr>
<tr>
<td>24 h ECG VA</td>
<td>Lisinopril (n.8165)</td>
<td>No-Lisinopril (n.8162)</td>
<td>2p</td>
</tr>
<tr>
<td>0 PVC %</td>
<td>39.1</td>
<td>39.0</td>
<td>NS</td>
</tr>
<tr>
<td>&gt; 1 PVC %</td>
<td>43.8</td>
<td>49.8</td>
<td>NS</td>
</tr>
<tr>
<td>&gt; 10 PVC/ah</td>
<td>17.8</td>
<td>18.2</td>
<td>NS</td>
</tr>
<tr>
<td>nsVT %</td>
<td>5.2</td>
<td>5.1</td>
<td>NS</td>
</tr>
</tbody>
</table>

VF = ventricular fibrillation, sVT = sustained ventricular tachycardia, PVC = premature ventricular contractions, nsVT = non-sustained ventricular tachycardia.

While L treatment did not influence the VA profile detected by pre-discharge 24 h ECG monitoring, in-hospital life-threatening VA were less frequent in pts allocated to L. This "antiarrhythmic" effect of L in the early phase of MI could have contributed to the reduction of early mortality shown with this treatment in GISSI-3 trial.

903 Angioplasty: Conventional

Monday, March 25, 1996, Noon-2:00 p.m.
Orange County Convention Center, Hall E
Presentation Hour: 1:00 p.m.-2:00 p.m.