The 60 Minutes Myocardial Infarction Project

Characteristics on admission and clinical outcome in patients with reinfarction compared to patients with a first infarction

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**Purpose** The purpose of the study was to evaluate parameters that characterize patients with myocardial reinfarction as compared to patients with a first infarction in clinical practice, and possibly to determine their clinical outcome.

**Methods** The 60 Minutes Myocardial Infarction Project is a German multicentre prospective observational study in which 136 hospitals are participating. Fourteen thousand, nine hundred and eighty consecutive patients with acute Q wave myocardial infarction were included from July 1992 to September 1994.

**Results** Out of these 14 980 patients, there were 2854 (19%) with reinfarction and 12126 (81%) with a first infarction. Patients with a reinfarction arrived at the hospital 24 min earlier than patients with a first infarction (pre-hospital delay 156 vs 180 min; P<0.001); the door-to-needle time with reinfarction was longer (38 vs 30 min; P<0.001); however, patients with reinfarction were older (69 vs 66 years; P<0.001), had a lower rate of a diagnostic first ECG (54 vs 71%; P<0.001) and received thrombolytic therapy less frequently than patients with a first infarction (46 vs 52%; P<0.001). A low number of patients received primary PTCA (n=205) since only a few hospitals offered a primary PTCA service at the time the study was performed. In patients with reinfarction, there were more reasons as to why thrombolytic therapy was not given (24 vs 21%; P<0.001). Left bundle branch block occurred more frequently in patients with reinfarction (15 vs 8%; P<0.001). The intra-hospital course in patients with reinfarction was associated with an increase of complications and intra-hospital death (23 vs 15%; P<0.001).

**Conclusions** Although reinfarction patients arrived earlier at hospital than patients with a first infarction, the former received thrombolytic therapy less frequently than the latter. Patients with reinfarction were older, more frequently had a non-diagnostic ECG on admission and had a higher rate of contraindications against thrombolytic therapy.

(Eur Heart J 1998; 19: 879–884)

**Key Words:** Acute myocardial infarction, reinfarction, thrombolysis, pre-hospital delay times.

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**Introduction**

Myocardial reinfarction has been shown to be an independent predictor for both short- and long-term mortality in several studies1–5. Risk factors for increased mortality are age, progressive coronary heart disease, concomitant diseases and contraindications against thrombolytic therapy or PTCA. A recent study demonstrated that 68% of ECGs were diagnostic on admission6.

The beneficial effect of fibrinolytic therapy has been demonstrated in patients with acute myocardial infarction presenting with ST elevation or bundle branch block — irrespective of age, sex, blood pressure, heart rate, or previous history of myocardial infarction and diabetes mellitus — and most benefit accrue the earlier treatment begins7. Thus, the effect of any recanalization in myocardial infarction depends on the time span...
between onset of symptoms and the start of therapy. It is therefore of interest to know whether reinfarction patients recognize their symptoms earlier and thus have a shorter pre-hospital delay than first infarction patients. In addition, does a history of previous myocardial infarction result in an intra-hospital time gain, as regards faster initiation of therapy? The primary aim of the current study therefore was to describe patient characteristics, pre-hospital delay, treatment, complications and outcome of patients with reinfarction compared to patients with a first infarction.

The 60 Minutes Myocardial Infarction Project was conducted with the intention of shortening the delay between onset of pain and the initiation of reperfusion therapy. The results of the study reflect current clinical practice in the treatment of acute myocardial infarction in Germany.

Methods

The 60 Minutes Myocardial Infarction Project

The 60 Minutes Myocardial Infarction Project was a prospective observational German multicentre study set up to investigate current treatment of acute Q wave myocardial infarction. The primary aim of the project was to treat more patients within the first 60 min of onset of symptoms. Current delay times and early infarction therapy were documented and efforts were made to reduce time delay by modifying hospital procedures and by campaigns.

One hundred and thirty six hospitals throughout Germany voluntary participated in the study, including tertiary care centres and local hospitals. The participating hospitals were mainly members of the ALKK-(Arbeitsgemeinschaft leitender kardiologischer Krankenhausärzte) Group which consists of non-university cardiology centres in Germany. Each hospital agreed by written consent to enroll all patients with acute myocardial infarction. Informed consent was obtained to allow processing of their data. For patients, participation in the study was on a voluntary basis.

Study population

Between July 1992 and September 1994 a total of 14 980 patients were registered. All patients with acute myocardial infarction admitted within 96 h of onset of symptoms were included and followed during their hospital stay.

Diagnosis of acute myocardial infarction was based on at least two of the three following signs: persistent angina pectoris for more than 20 min; ST segment elevation of 1 mm or more in at least one standard lead, or 2 mm or more in at least two contiguous precordial leads; or the presence of left bundle branch block; elevations of enzymes (creatine kinase and its MB isoenzyme, aspartate aminotransferase, lactic dehydrogenase) of twice the normal value. A non-diagnostic first ECG for suspected acute myocardial infarction was characterized as follows: no ST segment elevation of 1 mm or more in one standard lead or 2 mm or more in at least two contiguous precordial leads; or interpretation of the first ECG was aggravated by bundle branch block or a pacemaker ECG. Reinfarction was diagnosed by a history of previous myocardial infarction. In case the first ECG on admission was not diagnostic, repeat controls of ECG and laboratory tests were performed. The final diagnosis and all decisions regarding treatment were left to the discretion of the treating physician. Patients with intra-hospital acute myocardial infarction and those with acute myocardial infarction receiving pre-hospital thrombolytic therapy were included. Pre-hospital delay was defined as the time from the beginning of the most recent attack of chest pain, or the latest intensified or prolonged episode of pain, to arrival at hospital. Intra-hospital delay — door-to-needle time — was defined as the time from admission to hospital and ending with application of thrombolytic therapy.

Complications during hospital stay were divided into severe complications, such as cerebral haemorrhage, ischaemic stroke, major bleeding requiring transfusion, ventricle rupture, and minor complications such as allergic reaction and minor bleeding without transfusion.

Data collection

For registry and collection of data two standardized case report sheets were used, each consisting of a single page. A data guide was provided describing the intention of each variable in the record form. The first questionnaire relates to data from the first 48 h after admission (appendix, Erhebungsbogen[6]). The data recorded age, gender, pre-hospital delay, patient history, therapeutic procedure and outcome within the first 48 h. The second report was completed at discharge and registered the hospital discharge date, survival status, cause of death and reinfarction during the hospital stay.

A coordinator at each of the participating hospitals was responsible for data acquisition, and making sure it was complete and correct. The reports were collected at a central data collection and evaluation centre (Zentrum zur Methodischen Betreuung von Therapiestudien, University Heidelberg). At the data centre, all records were checked for formal completeness and, if necessary, returned to the participating hospitals for correction. Completed data were finally received for 14 755 patients, i.e. 98.4%. The entire data were double keyed and checked for inconsistencies and out of range errors.

Statistics

Statistical analysis of the data was performed by a commercially available system (SAS®, version 6-09) and
are reported as proportions or medians wherever appropriate and means ± standard deviation. For baseline data and determinants of intra-hospital mortality and thrombolytic therapy, the chi-squared test was used. Odds ratios and 95% confidence intervals (95% CI) were calculated. For comparison of mean values, medians of calculated. For comparison of mean values, medians of was considered statistically significant. To estimate prognostic determinants a Cochran–Mantel–Haenszel test was used.

**Results**

**Baseline data of patients with reinfarction as compared to patients with a first infarction**

Nearly one fifth (19.3%) of the patients had a prior myocardial infarction. Table 1 summarizes the baseline data of the study population. Reinfarction patients were older (69 vs 66 years; \(P<0.001\)) and less frequently had a diagnostic ECG on admission (54 vs 71%; \(P<0.001\)) (Fig. 2). Resuscitation was necessary more frequently in reinfarction patients (9 vs 6%; \(P<0.001\)), and a bundle branch block in the first ECG occurred more frequently (15 vs 8%; \(P<0.001\)). The initial blood pressure and heart rate did not differ significantly between the two groups. Thrombolysis was applied in a lower percentage of patients with reinfarction (46 vs 52%; \(P<0.001\); 0.8 vs 1.5%) (Fig. 2). The total number with primary PTCA was very low within the entire study population. Concomitant oral medications in the first 48 h in the intensive care unit did not differ between the two groups, with the exception of acetylsalicylic acid (77 vs 81%; \(P<0.001\)); this was applied less frequently in the reinfarction group. Multivariate regression analysis was used to calculate the chance of receiving acetylsalicylic acid within the first 48 h. The odds ratios were low for antecedent cardiopulmonary resuscitation (0.6; 95% CI=0.5–0.9), coumadin therapy (0.4; 95% CI=0.3–0.7), surgery or trauma within the last 14 days (0.5; 95% CI=0.4–0.7), renal failure (0.3; 95% CI=0.2–0.6), and prior infarction (0.7; 95% CI=0.6–0.8). The odds ratios were increased, that means the chance of receiving acetylsalicylic acid was increased, for antecedent intravenous heparin application (3.0; 95% CI=2.6–3.6) and thrombolytic therapy (3.1; 95% CI=2.7–3.6).

**Pre-hospital delay, door-to-door needle time, contraindication for thrombolytic therapy and intra-hospital course**

Patients with reinfarction (median 156 min; 95% CI=[150, 165]) had a shorter pre-hospital delay \(P<0.001\) than patients with a first infarction (median 180 min; 95% CI=[170, 180]) (Fig. 1). Pre-hospital delay could not be determined in 26.9% patients with reinfarction and 19.9% of patients with a first infarction. The intra-hospital delay—door to needle time—was slightly longer \(P<0.001\) in patients with reinfarction (median 38 min; 95% CI=[35, 40]). Patients with a first infarction had a door-to-needle time of 30 min (95% CI=[30, 30]).

Possible reasons as to why a fibrinolytic therapy was not used were analysed: patients with reinfarction had a higher incidence \(P<0.001\) of coumadin therapy (2.6% vs 0.5%; 95% CI=[3.7–6.7]), cardiopulmonary resuscitation (5.9% vs 4.3%; 95% CI=[1.1–1.6]) before admission and previous arterial or central venous puncture (9.0% vs 6.5%; 95% CI=[1.2–1.6]) than patients with a first infarction. Intramuscular injection within 7 days

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**Table 1 Baseline data of patients with reinfarction vs patients with a first infarction on admission**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total n=14755</th>
<th>Reinfarction % (n=2854)</th>
<th>First infarction % (n=11901)</th>
<th>P value</th>
<th>Odds ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>10481</td>
<td>72</td>
<td>67</td>
<td>(P&lt;0.001)</td>
<td>1.2</td>
<td>1.1–1.3</td>
</tr>
<tr>
<td>Age (mean in years)</td>
<td>66 ± 13</td>
<td>69 ± 11</td>
<td>65 ± 13</td>
<td>(P&lt;0.001)</td>
<td>1.5</td>
<td>1.4–1.7</td>
</tr>
<tr>
<td>Age &gt;65 years</td>
<td>7477</td>
<td>46</td>
<td>37</td>
<td>(P&lt;0.001)</td>
<td>1.5</td>
<td>0.6–0.7</td>
</tr>
<tr>
<td>Diabetic ECG</td>
<td>9988</td>
<td>54</td>
<td>71</td>
<td>(P&lt;0.001)</td>
<td>0.5</td>
<td>0.4–0.6</td>
</tr>
<tr>
<td>Bundle branch block</td>
<td>1417</td>
<td>15</td>
<td>8</td>
<td>(P&lt;0.001)</td>
<td>1.8</td>
<td>1.6–2.0</td>
</tr>
<tr>
<td>Anterior infarction</td>
<td>6872</td>
<td>50</td>
<td>48</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resuscitation</td>
<td>991</td>
<td>9</td>
<td>6</td>
<td>(P&lt;0.001)</td>
<td>1.6</td>
<td>1.4–1.8</td>
</tr>
<tr>
<td><strong>Haemodynamics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systolic blood pressure (mmHg; mean)</td>
<td>136 ± 30</td>
<td>135 ± 30</td>
<td>136 ± 29</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diastolic blood pressure (mmHg; mean)</td>
<td>81 ± 24</td>
<td>81 ± 16</td>
<td>81 ± 16</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart rate (beats min⁻¹; mean)</td>
<td>84 ± 24</td>
<td>88 ± 26</td>
<td>83 ± 26</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Initial therapy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thrombolysis</td>
<td>7481</td>
<td>46</td>
<td>52</td>
<td>(P&lt;0.001)</td>
<td>0.8</td>
<td>0.8–0.9</td>
</tr>
<tr>
<td>Primary PTCA</td>
<td>205</td>
<td>0.8</td>
<td>1.5</td>
<td>(P&lt;0.003)</td>
<td>0.5</td>
<td>0.4–0.8</td>
</tr>
<tr>
<td>Acetylsalicylic acid</td>
<td>11887</td>
<td>77</td>
<td>81</td>
<td>(P&lt;0.001)</td>
<td>0.8</td>
<td>0.7–0.8</td>
</tr>
<tr>
<td>Beta-blocker</td>
<td>2362</td>
<td>15</td>
<td>16</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrites</td>
<td>12254</td>
<td>81</td>
<td>83</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heparin</td>
<td>5964</td>
<td>83</td>
<td>83</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No medication</td>
<td>761</td>
<td>5</td>
<td>5</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 1**

- **Differential blood pressure (mmHg):**
  - Median: 136 ± 30
  - Standard deviation: 30

**Figure 2**

- **Heart rate (beats per minute):**
  - Median: 84 ± 24
  - Standard deviation: 24

**Figure 3**

- **Diastolic blood pressure (mmHg):**
  - Median: 81 ± 24
  - Standard deviation: 24

**Figure 4**

- **Systolic blood pressure (mmHg):**
  - Median: 136 ± 30
  - Standard deviation: 30

**Figure 5**

- **Heart rate (beats per minute):**
  - Median: 84 ± 24
  - Standard deviation: 24

**Figure 6**

- **Diastolic blood pressure (mmHg):**
  - Median: 81 ± 24
  - Standard deviation: 24

**Figure 7**

- **Systolic blood pressure (mmHg):**
  - Median: 136 ± 30
  - Standard deviation: 30

**Figure 8**

- **Heart rate (beats per minute):**
  - Median: 84 ± 24
  - Standard deviation: 24

**Figure 9**

- **Diastolic blood pressure (mmHg):**
  - Median: 81 ± 24
  - Standard deviation: 24

**Figure 10**

- **Systolic blood pressure (mmHg):**
  - Median: 136 ± 30
  - Standard deviation: 30

**Figure 11**

- **Heart rate (beats per minute):**
  - Median: 84 ± 24
  - Standard deviation: 24

**Figure 12**

- **Diastolic blood pressure (mmHg):**
  - Median: 81 ± 24
  - Standard deviation: 24

**Figure 13**

- **Systolic blood pressure (mmHg):**
  - Median: 136 ± 30
  - Standard deviation: 30

**Figure 14**

- **Heart rate (beats per minute):**
  - Median: 84 ± 24
  - Standard deviation: 24

**Figure 15**

- **Diastolic blood pressure (mmHg):**
  - Median: 81 ± 24
  - Standard deviation: 24

**Figure 16**

- **Systolic blood pressure (mmHg):**
  - Median: 136 ± 30
  - Standard deviation: 30

**Figure 17**

- **Heart rate (beats per minute):**
  - Median: 84 ± 24
  - Standard deviation: 24

**Figure 18**

- **Diastolic blood pressure (mmHg):**
  - Median: 81 ± 24
  - Standard deviation: 24

**Figure 19**

- **Systolic blood pressure (mmHg):**
  - Median: 136 ± 30
  - Standard deviation: 30

**Figure 20**

- **Heart rate (beats per minute):**
  - Median: 84 ± 24
  - Standard deviation: 24

**Figure 21**

- **Diastolic blood pressure (mmHg):**
  - Median: 81 ± 24
  - Standard deviation: 24
before myocardial infarction occurred less frequently ($P<0.001$) in patients with reinfarction compared to patients with a first infarction (2.2% vs 3.7%; 95% CI = 0.4–0.7). Other reasons for withholding thrombolytic therapy, such as for a peptic ulcer, a cerebral stroke within the last 3 months, malignancy, and trauma or surgery within the last 14 days were not significantly different between the two groups. Thus there were more reasons given for withholding thrombolysis ($P<0.001$) in patients with reinfarction than in patients with a first infarction (24% vs 21.2%; 95% CI = 1.1–1.3).

Minor and major complications occurred more frequently and intra-hospital mortality was significantly higher in patients with reinfarction compared to patients with a first infarction (23 vs 15%; $P<0.001$; Fig. 3).

**Determinants of mortality and thrombolytic therapy**

Patients who died of acute Q wave reinfarction and a first infarction within their hospital stay were retrospectively analysed. The results are shown in Table 2. Using univariate analysis, the following determinants of mortality in patients with reinfarction compared to patients with a first infarction were determined: male ($P<0.001$), resuscitation ($P<0.02$), chronic renal failure ($P<0.01$), left bundle branch block ($P<0.01$), a less diagnostic first ECG ($P<0.001$) and unknown, i.e. uncertain pre-hospital delay ($P<0.01$).

In comparison to patients with a first infarction, patients with reinfarction had the following determinants of thrombolytic therapy (univariate analysis): male ($P<0.001$); age $\geq$ 65 years ($P<0.001$); resuscitation ($P<0.001$); left bundle branch block ($P<0.001$); a less diagnostic first ECG ($P<0.001$), unknown pre-hospital delay ($P<0.001$) and increased intra-hospital mortality ($P<0.001$).

**Discussion**

The 60 Minutes Myocardial Infarction Project is a German multicentre nationwide registry of acute myocardial infarction. The primary aim was to describe patient characteristics, pre-hospital delay, treatment, complications and outcomes of patients with acute myocardial infarction[6]. The 136 participating hospitals included both larger, specialized cardiology units and smaller community hospitals. In contrast to other acute myocardial infarction studies, all consecutive patients with acute Q wave myocardial infarction were included. Furthermore a wide time window of 96 h after the onset of pain was used and all patients with the discharge diagnosis of acute myocardial infarction were included. Thus, the study population represents a "real-life" population and the ensuing diagnostic and therapeutic procedures real life clinical practice in Germany[8–9]. The current study was conducted as a not randomized, prospective project.

The major findings of the current analysis—comparing patients with acute Q wave reinfarction to patients with a first infarction —were: patients with reinfarction had a shorter pre-hospital delay and were older than patients with a first infarction. However, the door-to-needle time was longer in the reinfarction group, there were more reasons for withholding thrombolytic therapy, and the first ECG was diagnostic at a lower rate. Fibrinolytic therapy was applied less frequently in patients with reinfarction and the
intra-hospital course was associated with a higher incidence of complications and mortality than in those with a first infarction. No significant differences were observed when patients with reinfarction were compared with respect to the location of the infarction, the initial systolic and diastolic blood pressure, heart rate and the initial application of beta-blockers, nitrates and heparin. Mortality was increased in patients with reinfarction with the following determinants: male, resuscitation, chronic renal failure, left bundle branch block and a non-diagnostic first ECG.

In smaller, non-specialized hospitals without the facilities to administer acute coronary intervention, fibrinolytic therapy is a well-established procedure that effectively reduces mortality and improves life expectancy in patients with an acute first myocardial infarction and in patients with reinfarction. It is well known that a history of prior myocardial infarction is an independent risk factor for short- and long-term cardiac mortality. Further predictors of intra-hospital mortality are age ≥65 years, bundle branch block, non-diagnostic ECG, shock and resuscitation. Patients with a history of prior myocardial infarction were older so that the determination of pre-hospital delay may have been less accurate. They also had a higher rate of concomitant diseases. In this group the first ECG on admission frequently revealed bundle branch block and was not of diagnostic use in suspected acute myocardial infarction. These findings, and the fact that patients with reinfarction exhibited more contraindications to the application of thrombolytic therapy, may have led to a less frequent use of thrombolysis and a prolonged door-to-needle time.

There are disparities in pre-hospital delays in the literature, varying between 2 and 7.5 h, depending on the cut-off point of the inclusion criteria. In these studies Ottesen et al. found that prior myocardial infarction had no effect on patient delay whereas Roberts et al. confirmed the results of our registry, that reinfarction reduces pre-hospital delays. Additionally, Maynard et al. reported a similar finding to the current study, indicating that the time to treatment is increased with age.

The clinical outcome of patients suffering from acute myocardial infarction depends on prompt restoration of patency of the infarct-related coronary artery. Primary PTCA has been established as an alternative method for treatment of acute myocardial infarction and is comparable to fibrinolytic therapy in reducing bleeding complications and non-fatal and fatal cardiac events. There were only 205 (2.3%) patients in our study who received primary PTCA. A 24-h primary PTCA service was not introduced before the beginning of 1994 in a number of centres and thus only a few could offer this service. The 60 Minutes Myocardial Infarction Project includes results from large numbers of smaller hospitals without the availability of catheter laboratories. Thus, the current study reflects real life clinical practice in the use of fibrinolytic therapy in Germany in the treatment of acute myocardial infarction. The study demonstrates that even among patients who received fibrinolytic therapy, mortality was increased in patients with reinfarction compared to patients with a first infarction. Reinfarction patients who received thrombolytic therapy were older, less frequently had a diagnostic ECG on admission and were more frequently resuscitated prior to admission. It remains to be answered whether this subgroup of patients with reinfarction and increased risk of intra-hospital death would benefit from primary PTCA. In these cases the physician has to weigh the risk of transportation to a specialized centre with PTCA facilities against prolonged delay. Registries such as the 60 Minutes Myocardial Infarction Project provide valuable lessons in implementing randomized mega trials into clinical practice. They serve to detect special subgroups of patients and to improve and differentiate patient care in the future.

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**Table 2** Determinants of mortality and thrombolytic therapy: reinfarction vs a first infarction (univariate analysis)

<table>
<thead>
<tr>
<th>Reinfarction vs a first infarction</th>
<th>Mortality</th>
<th></th>
<th>Thrombolytic Therapy</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$P$ value</td>
<td>Odds ratio</td>
<td>95% CI</td>
<td>$P$ value</td>
</tr>
<tr>
<td>Male</td>
<td>0.001</td>
<td>1.6</td>
<td>1.3–1.9</td>
<td>0.001</td>
</tr>
<tr>
<td>Age ≥65 years</td>
<td></td>
<td></td>
<td></td>
<td>0.001</td>
</tr>
<tr>
<td>Resuscitation</td>
<td>0.2</td>
<td>ns</td>
<td></td>
<td>0.001</td>
</tr>
<tr>
<td>Syst BP &lt;90, no CPR</td>
<td></td>
<td></td>
<td></td>
<td>ns</td>
</tr>
<tr>
<td>Chronic renal failure</td>
<td>0.01</td>
<td>1.9</td>
<td>1.2–3.2</td>
<td>ns</td>
</tr>
<tr>
<td>Left bundle branch block</td>
<td>0.001</td>
<td>1.7</td>
<td>1.3–2.1</td>
<td>0.001</td>
</tr>
<tr>
<td>Diagnostic ECG</td>
<td>0.001</td>
<td>0.6</td>
<td>0.5–0.7</td>
<td>0.001</td>
</tr>
<tr>
<td>Anterior infarction</td>
<td>ns</td>
<td></td>
<td></td>
<td>ns</td>
</tr>
<tr>
<td>Pre-hospital delay time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;6 h</td>
<td>ns</td>
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<td>ns</td>
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<tr>
<td>&gt;12 h</td>
<td>ns</td>
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<td>ns</td>
</tr>
<tr>
<td>Not known</td>
<td>0.06</td>
<td>1.2</td>
<td>1.0–1.4</td>
<td>0.001</td>
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<tr>
<td>Thrombolytic therapy</td>
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<td></td>
<td></td>
<td>0.001</td>
</tr>
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*Eur Heart J, Vol. 19, June 1998*
References


