

Prompt Pharmacological Reperfusion Followed by Early Mechanical Revascularization in Selected STEMI Patients

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Background:

Most patients allocated to thrombolysis in the studies that established the superiority of primary PCI (PPCI) over fibrinolysis for the treatment of STEMI, did not undergo definitive revascularization during their admission.

Aim:

We assessed the short and long-term survival of STEMI patients that presented 2-3 hours after symptom onset, and were treated immediately by thrombolysis (THR) followed after reperfusion by definitive PCI to the infarct-related artery (IRA) within 6-24 hours. These patients were compared to STEMI patients treated by PPCI.

Methods:

From 2008 to 2010, 316 patients underwent reperfusion therapy for STEMI at our hospital. 183 patients (58 %) were treated by PPCI and 133 (42%) by THR. Patients were selected for THR only if symptom onset occurred within 3 hours prior to CCU admission and in the absence of hemodynamic compromise, and all underwent PCI to the IRA within 6- 24 hours after THR. In all aspects patients were treated according to current guidelines.

	Patient number (%)	In-hospital mortality	1-month mortality	1-year mortality
PPCI	183 (58%)	5 (2.7%)	11 (6%)	17 (9.3)
THR	133 (42%)	1 (0.7%)	1 (0.7%)	1 (0.7%)
p-value		ns	0.016	0.001

Results:

In-hospital, 1 month, and 1-year mortality of the PPCI patients versus the THR patients are presented (Table).

No intra-cranial hemorrhage occurred in the THR group.

Conclusions:

Early-arriving STEMI patients, with no signs of hemodynamic compromise, can benefit from prompt reperfusion by thrombolytic therapy followed by early IRA revascularization. We call for a multi-center, prospective study, to substantiate the validity of this strategy.