

Long-term effectiveness of early administration of glycoprotein IIb/IIIa agents to real-world patients undergoing primary percutaneous interventions: results of a registry study in an ST-elevation myocardial infarction network

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Aims: To evaluate the clinical impact of early administration of glycoprotein IIb/IIIa agents (IIb/IIIa agents) in the context of a dedicated hub and spoke network allowing very prompt pharmacological/mechanical interventions.

Methods and results: Using a prospective database, we conducted a cohort study of ST-elevation myocardial infarction (STEMI) patients ($n = 1124$) undergoing primary percutaneous coronary interventions (PPCIs) and IIb/IIIa agents administration (period, 2003–2006). Comparisons were planned between patients receiving early IIb/IIIa agents administration (in hub/spoke centre emergency departments or during ambulance transfer; early group, $n = 380$) or delayed administration (in the catheterization laboratory; late group, $n = 744$). The primary outcome measure was long-term overall mortality/re-infarction. Baseline characteristics of the two groups were largely comparable. Angiographically, early group patients more often achieved pre-PPCI TIMI Grade 2–3 and TIMI Grade 3 flow. Clinically, the early administration group experienced lower 2-year risk of unadjusted mortality/re-infarction (17 vs. 23%; $P = 0.01$). After adjustment for potential confounders, early administration was associated with favourable outcome in the overall population (HR = 0.71, $P = 0.03$) and in high-risk subgroups (TIMI risk index >25 , HR = 0.64, $P = 0.02$; Killip class >1 , HR = 0.54, $P = 0.01$).

Conclusion: In patients treated by PPCI within a STEMI network setting, early administration of IIb/IIIa agents may provide long-term clinical benefits. Notably, these results appeared magnified in high-risk patients.