ACUTE CORONARY SYNDROMES IS EARLY ABCIXIMAB BENEFICIAL IN STEMI?

The results of the MISTRAL trial demonstrate that early, in-ambulance administration of the glycoprotein IIb/IIIa antagonist abciximab does not improve outcomes in patients with ST-segment elevation myocardial infarction (STEMI). Abciximab is used routinely in primary percutaneous coronary intervention (PCI), as recommended in current US and European guidelines. However, the timing of this therapy is still debated. The placebo-controlled, double-dummy MISTRAL trial was designed to investigate this issue.

The study was conducted at 11 hospitals in France. The investigators enrolled 256 patients with STEMI of <6 h duration. These individuals were randomly assigned to receive 0.25 mg/kg abciximab or placebo in the ambulance. Patients in the placebo group received 0.25 mg/kg abciximab in the catheterization laboratory. All patients received aspirin and unfractionated heparin in the ambulance.

The median time between symptom onset and first dose of abciximab was 114 min, with a median 65 min difference between the two groups. The primary end point of the study was ST-segment resolution 60 min after PCI, for which no differences were observed between the treatment groups. Although preprocedural TIMI flow grade 2–3 was numerically more common and slow flow during PCI less frequent among patients who received early than late abciximab, these differences were not significant. The incidence of procedural embolization was, however, statistically lower in the early than in the late abciximab group (8.1% vs 21.1%, $P=0.008$). The investigators comment that “abciximab given very early in the course of STEMI might facilitate primary PCI by improving the visibility of the coronary anatomy, thus allowing a faster and more-accurate procedure.” Although the study was not powered to assess hard clinical end points, no differences in the incidence of major adverse cardiac events were observed at 1 and 6 months after PCI.

The investigators speculate that the benefits of early abciximab therapy might be confined to high-risk patients, not represented in their study, or that abciximab was not administered early enough within the “golden” 2 h window. Additional randomized trials will be required to investigate these hypotheses.

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Original article Ohlmann, P *et al.* Prehospital abciximab in ST-segment elevation myocardial infarction: results of the randomized, double-blind MISTRAL study. *Circ. Cardiovasc. Interv.* doi:10.1161/CIRCINTERVENTIONS.111.961425