

**Comparison of bleeding complications and three-year survival of low molecular weight heparin versus unfractionated heparin for acute myocardial infarction. The FAST-MI registry**

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**Background:** Recent clinical studies suggest that low molecular weight heparin (LMWH) could be an effective and safe alternative to unfractionated heparin (UFH) for patients with acute myocardial infarction (AMI).

**Aims:** To assess the impact of the choice of anticoagulant (LMWH vs. UFH) on bleeding, the need for blood transfusion and three-year clinical outcomes in patients with AMI from the FAST-MI registry.

**Methods:** FAST-MI is a nationwide registry carried out in France over a 1-month period in 2005, including consecutive patients with AMI admitted to intensive care unit <48h from symptom onset in 223 participating centers.

**Results:** 2854 patients treated with heparins were included. The risk of major bleeding or transfusion (3.0% vs. 7.0%) and in-hospital death (3.2% vs 9.2%) was lower with LMWH compared with UFH, a difference that persisted after multivariate adjustment (OR=0.51, 95% CI: 0.34-0.76 and OR=0.53, 95% CI: 0.37-0.76, respectively). Three-year survival and stroke and reinfarction-free survival were also higher with LMWH compared with UFH (adjusted HR =0.73, 95% CI: 0.61-0.86 and HR =0.73, 95% CI: 0.62-0.85, respectively). In two cohorts of patients matched on a propensity score for getting LMWH and with similar baseline characteristics (834 patients per group), major bleeding and transfusion were lower while three-year survival was significantly higher in patients receiving LMWH.

**Conclusion:** The present data suggest that the use of LMWH in AMI patients may have a better benefit/risk profile than UFH with in terms of bleeding, need for transfusion, and long term survival.