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Statins after an acute coronary syndrome: are high doses useful? Data from the French FAST-MI registry

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Purpose: The beneficial effect of a high dose of statin (HDS) compared with lower doses is controversial in secondary prevention. We studied factors impacting the prescription of a HDS at discharge after an Acute Myocardial Infarction [AMI], and assessed effects of this HDS on mortality and cardiovascular morbidity.

Methods: Participants were 2240 survivors of a STEMI or NSTEMI from the French FAST-MI registry conducted in 2005, with a known statin dose at discharge. Rosuvastatin at any dose, atorvastatin ≥ 20 mg/d and Simvastatin 40 mg/d were considered as HDS. Factors related to HDS prescription were studied using logistic regression. Impact of HDS prescription on occurrence of death or major cardiovascular events [MACE] (MI, stroke or revascularisation) was studied using a Cox proportional hazards model after propensity score matching.

Results: 54.5% of the patients had a HDS prescription at discharge. In crude risk analyses, HDS prescription was associated with a lower risk of death or MACE (HR=0.84 [0.71-0.98], $p<0.03$). However, patients already under treatment with a HDS before the ACS, patients managed in a university hospital, located in a large city, with a younger age, a STEMI, a high blood pressure at entry (≥ 140 mmHg) and who were discharged rapidly after their AMI were more likely to benefit from a HDS prescription at discharge. After propensity score matching, the dose of statin the patients received at discharge was not related to death or MACE occurrence in the following 3 years (HR=1.04 [0.77-1.36], $p=0.87$). Using a more stringent definition for HDS (atorvastatin ≥ 40 mg or rosuvastatin ≥ 20 mg) yielded similar results.

Conclusions: The issue of long term benefit of HDS therapy compared with lower ones after an AMI remains unanswered in an observational context, because in this "real life" large registry, high doses were preferentially prescribed to patients with a low risk profile, but less commonly to patients with a high risk profile.