Aggressive lipid lowering therapy with pitavastatin and ezetimibe improve cardiovascular outcomes in patients with ST segment elevation myocardial infarction: insights from the HIJ-PROPER Study

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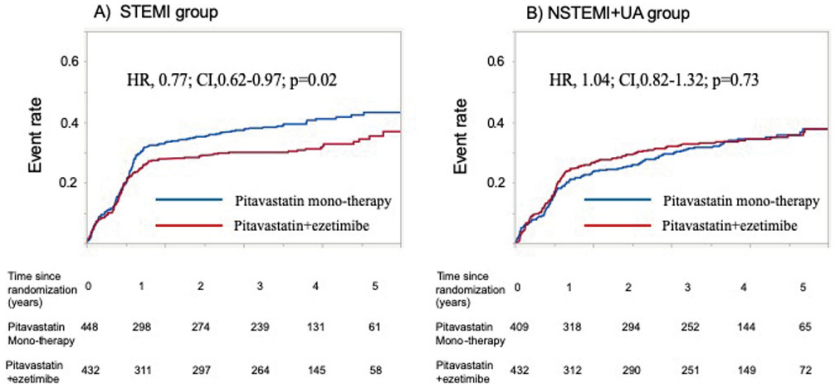
Aims: The purpose of this study was to evaluate the effect of aggressive lipid-lowering therapy with pitavastatin and ezetimibe in patients with ST-segment elevation myocardial infarction (STEMI) as compared with those with other classification of an acute coronary syndrome (ACS) including non-STEMI (NSTEMI) and unstable angina pectoris (UA).

Methods: This is a post hoc sub-analysis of the HIJ-PROPER study. In the original study, ACS patients with dyslipidemia were randomized to either pitavastatin + ezetimibe therapy or pitavastatin monotherapy. In the present analysis, we divided HIJ-PROPER participants into the STEMI group (n=880) and NSTEMI + UA group (n=841). Cardiovascular events were analyzed between the two groups. The primary endpoint was a composite of major advanced cardiovascular events (MACE; all-cause death, non-fatal myocardial infarction, non-fatal stroke, unstable angina pectoris, and ischemia-driven revascularization)

Result: During median follow-up period of 3.4 years, the cumulative incidence of the primary endpoint in STEMI group was 31.9% in the pitavastatin+ezetimibe therapy, compared with 39.7% in the pitavastatin-monotherapy (HR, 0.77; 95% CI, 0.62–0.97; p=0.02). However, there was no effect of pitavastatin+ezetimibe therapy on the primary endpoint in the NSTEMI + UA group. Concerning the individual components of the primary endpoint in STEMI group, the percentage of occurrence of all-cause death was significantly lower in the pitavastatin+ezetimibe therapy compared to pitavastatin mono-therapy (14 patients (3.2%) vs. 31 patients (6.9%), respectively; HR, 0.45; 95% CI, 0.23–1.84, p=0.01). Multivariate analysis revealed that use of ezetimibe and prevalence of diabetes mellitus at baseline were independent predictors of primary endpoints in STEMI group (HR, 0.79; 95% CI, 0.63–0.99; p=0.04 for use of ezetimibe, HR 1.54; 95% CI, 1.22–1.94, p=0.0003 for diabetes mellitus).

Conclusion: Patients with pitavastatin+ezetimibe therapy as compared with pitavastatin-monotherapy had lower cardiovascular event in patients with ST-segment elevation myocardial infarction.



Kaplan-Meier curves for primary endpoint