

Statins bring the prognostic impact only in peripheral artery disease patients with elevated c-reactive proteins -subanalysis from multicenter registry-

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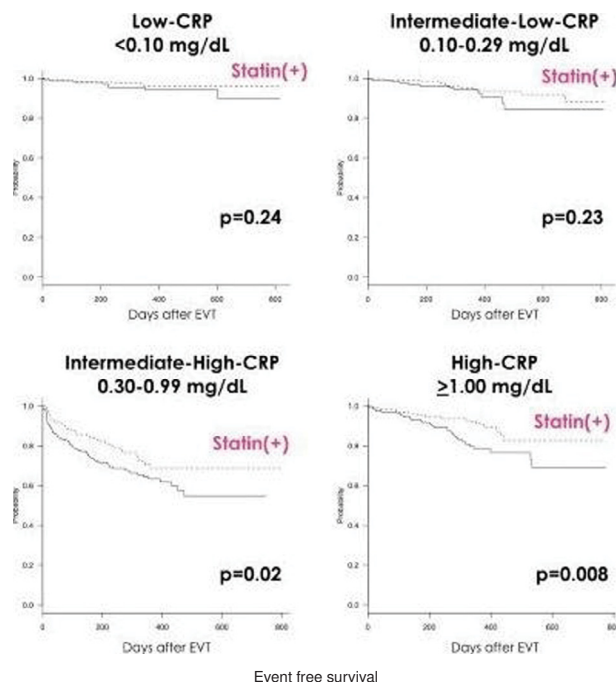
Introduction: Recent trials demonstrated favorable effects of statins on the clinical prognosis, partly through anti-inflammatory properties, in patients with coronary artery disease. However, this favorable effect has not been fully verified in patients with peripheral arterial disease (PAD). We hypothesized that statins exert different prognostic effects depending on the degrees of inflammation at the time of endovascular therapy (EVT).

Methods: This study is a subanalysis from the Toma-Code Registry that is a Japanese prospective cohort of 2,321 consecutive patients with PAD treated by endovascular therapy in hospitals from 2014 to 2016. After the exclusion of patients without information of C-reactive protein (CRP) at the time of index EVT, 2,039 patients including 1,039 statin users and 1,000 statin non-users were ultimately analyzed. The patient enrolled were divided into 4 categories depending on CRP level at the time of EVT; Low-CRP (<0.1 mg/dL), Intermediate-low-CRP (0.1–0.3 mg/dL), Intermediate-High-CRP (0.3–1.0 mg/dL), and High-CRP (>1.0 mg/dL). A composite of death, stroke, myocardial infarction, and major amputation as the primary

endpoint of this study was compared between statin users and non-users in each CRP category.

Results: The composite endpoint occurred in 255 patients during the observation period. Overall, statin users had a significantly lower event rate than non-users (Log-rank test: $P < 0.001$). However, there were no significant difference in the event rates between statin users and non-users in the Low-, and Intermediate-Low-CRP categories. Only in the Intermediate-High- and the High-CRP categories, statin users showed a significantly lower event rates than non-users ($P = 0.02$ and $P = 0.008$, respectively, Figures). Additionally, multivariate Cox regression analysis in the High-CRP group revealed that statin use was independently associated with the primary endpoint (adjusted hazard ratio: 0.67 [95% confidence interval: 0.45–0.99]), even after the adjustment of covariants.

Conclusion: Statins may exert a favorable prognostic effect in PAD patients with highly elevated CRP, but not in those with low to moderate CRP level.



Event free survival