The Japan Statin Treatment Against Recurrent Stroke (J-STARS): a multicenter, randomized, open-label, parallel-group study

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Background

Although statin therapy is beneficial for preventing first strokes, the benefit for recurrent stroke and its subtypes remains to be determined in Asian population. This study examined whether treatments with low-dose pravastatin prevent recurrence in ischemic stroke patients.

Methods

This is a multicenter, randomized, open-label, blinded-endpoint, parallel-group study of patients with non-cardioembolic ischemic stroke (atherothrombotic infarction, lacunar infarction, infarction of undetermined etiology). All patients were diagnosed with hyperlipidemia and with a total cholesterol level between 180 and 240 mg/dL at enrollment. Patients in the pravastatin group received 10 mg/day, and those in the control group received no statin treatment. The primary endpoint was the recurrence of stroke, including transient ischemic attack. The secondary endpoints included the onset of respective stroke subtypes and functional outcomes related to stroke. (NCT00221104)
Results

A total of 1578 patients (491 female, age 66.2±8.5 years) were randomized to either pravastatin group (n=793) or control group (n=785). There was no significant difference in baseline characteristics between the groups. During the follow-up of 4.9±1.4 years, recurrence of stroke similarly occurred in the both groups (2.56 vs. 2.65%/years, p=0.82; respectively). Regarding respective stroke subtypes, onset of atherothrombotic infarction was suppressed in the pravastatin group (hazard ratio 0.33 [95%CI 0.15-0.74], p=0.005), whereas significant intergroup differences were not found in the onset of other stroke subtypes (lacunar infarction, p=0.31; hemorrhagic stroke, p=0.82). The reduction rate of MMSE score tended to be slower in the pravastatin group (p=0.18). Conclusions: In patients with non-cardioembolic ischemic stroke, low-dose pravastatin treatment appears to reduce the incidence of atherothrombotic infarction, which is not the case for other stroke subtypes.

Disclosure

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