

Is It Reasonable in Strictly Regulating the Use of Statins for Treatment of Patients with Ischemic Stroke and Hyperlipidemia?

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Acta Neurol Taiwan 2013;22:97-98

Increasing body of evidence has demonstrated that hyperlipidemia is one of the important modifiable risk factors for ischemic stroke. A meta-analysis involving 42 trials assessing statin therapy for all-stroke prevention conducted by O'Regan and collaborators showed a pooled RR of 0.84 (95% CI 0.79-0.91)⁽¹⁾. Meanwhile, the Cholesterol Treatment Trialists⁽²⁾ showed every 1.0 mmol/L reduction in low-density lipoprotein cholesterol is associated with a corresponding 21 percent reduction in stroke. Up to date, management of dyslipidemia appears as an essential therapy in stroke patients for prevention of recurrent vascular events.

The manuscript⁽³⁾ was a single-center, retrospective observational study, but it raised some important issues during management of high-risk patients with hyperlipidemia. One of the critical questions is what evidence supports LDL-C treatment goals for secondary prevention in patients with stroke and hyperlipidemia in Taiwan? Adult Treatment Panel III (ATPIII) guidelines recommended LDL-c goals of <100 mg/dl in high-risk patients for secondary prevention, but the optional LDL-C therapeutic target was reduced to <70 mg/dl for very high-risk patients. The Stroke Prevention by Aggressive Reduction in Cholesterol Levels (SPARCL) trial⁽⁴⁾ demonstrated that the mean LDL level during the trial was 1.9 mmol/L among patients receiving atorvastatin 80 mg once daily and 3.3 mmol/L in the placebo group.

The 5-year risk reduction in ischemic stroke was hazard ratio (HR) 0.78 (95% CI 0.66-0.94), but should be weighed against the statistically significant increase in hemorrhagic stroke (HR 1.66, 95% CI 1.08 - 2.55).

Authors found that the levels of total cholesterol and LDL-C in patients with ischemic stroke and hyperlipidemia significantly increased during the follow-up at out-patients clinic compared their data at in-hospital. The alteration of blood lipid profiles was relevant to the adjusting dose of statins by physicians. The ratio of patients with acute stroke and hyperlipidemia having LDL-C < 100 mg/dL dropped from 91% to 41% after adjusting statin to the half initial dosage. They speculated that physicians adjusted dose of statins for complying with the regulation of dyslipidemia treatment in NHI of Taiwan. The study provided important real world information about management of dyslipidemia in patients with acute stroke and hyperlipidemia in Taiwan, but it lacked some direct evidence relating to the change of statin dosage, such as patient's adherence or compliance, and doctor's alert or decision making. However, it obviously indicated that a treatment gap existed for the management of stroke patients with hyperlipidemia between the guidelines of NHI in Taiwan and of ATP III. Therefore, 2008 Consensus for lipid management in Taiwan held by several relevant medical societies and made the similar suggestion of ATP III guideline may

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Received and Accepted January 14, 2013.

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the suitable recommendation for management of high-risk patients with hyperlipidemia in Taiwan.

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