



Short communication

Simvastatin-induced prevention of the increase in TNF- α level in the acute phase of ischemic stroke

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Abstract:

Like other proinflammatory cytokines, TNF- α may play an important role in the development of central nervous system injury following ischemic stroke. The aim of this study was to evaluate the influence of early treatment with simvastatin, an HMG-CoA reductase inhibitor, on serum TNF- α level in acute ischemic stroke (AIS). Patients with AIS (n = 36) were randomly assigned to the two groups: Group I (n = 18) treated with simvastatin 40 mg/day within 24 h after the onset of stroke and Group II (n = 18) not treated with the statin. Blood samples were obtained on days 1, 3 and 7 after stroke onset. Serum TNF- α level was significantly elevated on day 3 after the stroke onset in comparison to day 1 only in the simvastatin-treated group (increase in median values by 16.2% [p = 0.028] and 6.1% within 3 days in Group II and I, respectively). These findings indicate that simvastatin given within 24 h after the onset of stroke could prevent the increase in serum TNF- α level within 3 days.

Key words:

TNF- α , simvastatin, ischemic stroke
