STROKE

Could statin treatment during hospitalization improve survival after ischemic stroke?

Statins have been shown to aid both primary and secondary stroke prevention, but little is known about the efficacy of these drugs in the acute stroke setting. Alexander Flint and his colleagues at Kaiser Permanente and the University of California, San Francisco, USA set out to address this issue, and their results indicate that statin treatment during hospitalization for ischemic stroke improves poststroke survival.

The team conducted a retrospective analysis of records from 12,689 patients who had been hospitalized for ischemic stroke at any of 17 centers across Northern California. 1-year poststroke mortality was assessed in four scenarios: statin use before stroke (regardless of in-hospital use); statin use before and during hospitalization; statin initiation in hospital; and statin withdrawal in hospital.

The researchers used a statistical method known as grouped-treatment analysis, which, according to Flint, “models the local treatment environment at the hospital level.” This technique was chosen to

control for confounding effects at the individual-patient level.

Consistent with previous studies,

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patients who took statins before stroke showed a reduced risk of death within 1 year poststroke (HR 0.85). Patients who took statins both before and during hospitalization, or were initiated on statins during hospitalization, experienced even greater survival benefits (HRs 0.59 and 0.55, respectively). Statin withdrawal in hospital was associated with a substantially increased 1-year risk of death (HR 2.5).

“The results of these analyses lead us to conclude that ischemic stroke patients may benefit from being treated with a statin acutely in the hospital, as opposed

to waiting to commence statin therapy at the time of discharge or at outpatient follow-up,” says Flint.

Flint acknowledges that practical and ethical considerations might preclude a randomized clinical trial to test the new findings. As he points out, however, “higher-dose early statin treatment is being studied in the Neu-START trial, so important data on this general topic may come from this source.”

On the basis of the present data, Flint *et al.* recommend that statins should be administered early during hospitalization for ischemic stroke, and that statin treatment should be continued in patients who are already taking these drugs.

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Original article Flint, A. C. *et al.* Statin use during ischemic stroke hospitalization is strongly associated with improved poststroke survival. *Stroke* doi:10.1161/STROKEAHA.111.627729