Letter by Cappellari et al Regarding Article, “Statin Therapy and Outcome After Ischemic Stroke: Systematic Review and Meta-analysis of Observational Studies and Randomized Trials”

To the Editor:

In recent contribution of Stroke, Ní Chroínín et al reported that in patients treated with intravenous thrombolysis, statin treatment at stroke onset was not associated with favorable functional outcome (modified Rankin Scale, ≤2) at 90 days (odds ratio [OR], 1.01; 95% confidence interval [CI], 0.88–1.15; P=0.93, data available from 5 observational studies, 4993 patients). Also, it was associated with an increased fatality at 90 days (pooled OR, 1.25; 95% CI, 1.02–1.52; P=0.03, 3 observational studies, 4339 patients), although this association was not observed after adjustment for potential confounding variables.

The main point concerns the eligibility to intravenous thrombolysis for patients under statin treatment at stroke onset. The following 2 observations are given to illustrate our position. First, among the studies included by Ní Chroínín et al,1 only our previous study showed an association between statin use before stroke and an increased risk of symptomatic intracerebral hemorrhage (OR, 6.65; 95% CI, 1.58–29.12; P=0.010, 178 patients).2 However, the results should be interpreted with caution because of the limited sample size. In addition, the patients who used statin before stroke had more frequently a history of diabetes mellitus and an antiplatelet therapy at stroke onset, which are known risk factors for bleeding after thrombolysis. Second, the THRombolysis and STatin (THRaST) study recently reported that statin use in the acute phase (within 72 hours) after stroke was associated with favorable functional outcome (OR, 1.63; 95% CI, 1.18–2.26; P=0.003, 1844 patients) and a reduced risk of mortality at 90 days (OR, 0.48; 95% CI, 0.28–0.82; P=0.007, 1844 patients) in patients treated with intravenous thrombolysis.3

In the acute statin group, patients who continued with previous treatment using the same type and dose or switched to a higher dose or another type of statin during the acute phase of stroke showed no significant differences in the rate of favorable functional outcome (29.7% versus 30%; P=0.932, 746 patients) and mortality (7.1% versus 5%; P=0.231, 746 patients) at 90 days, compared with patients who started statin treatment in the acute phase. According to controlled randomized study of Blanco et al,4 also in THRaST study the statin withdrawal for the first 72 hours after stroke onset was associated with increased risk of death or dependency (modified Rankin Scale, >2; OR, 2.49; 95% CI, 1.32–4.70; P=0.005, 319 patients) at 90 days, compared with statin continuation during the acute phase.

These observations suggest that statin use at stroke onset negatively influences the outcome in thrombolysed patients when it is discontinued during the acute phase. Unfortunately, in the analysis of Ní Chroínín et al,1 data on statins use in the acute phase are not known in thrombolysed patients under statin treatment before stroke. This limitation could explain the conflicting results.

We believe that statin use at stroke onset is not a contraindication to intravenous thrombolysis when statin treatment is continued in the acute phase.

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Disclosures

None.

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