Admission C-Reactive Protein as a Predictor for Stroke Outcome Among Candidates for Thrombolysis: Decision Adjourned

To the Editor:

We read with interest the article by Montaner et al1 in which the authors claim that poststroke C-reactive protein (CRP) is a powerful prognostic tool among candidates for intravenous thrombolysis. The study raises several methodological and clinical questions.

Patients with baseline CRP >6 mg/dL were excluded from the study because of probable infection before stroke. The rationale behind this arbitrary cut-point was not mentioned, as CRP values of, say, 3 mg/dL may still be indicative of underlying infection. A lower cut-point may have resulted in other predictive values of admission CRP.

The authors did not report on the number of patients taking statins which may have confounded the measured CRP levels because statins have been shown to reduce CRP levels.2

No comment was also found regarding baseline body temperature and its possible correlation with CRP and outcome. If infections were the main cause of mortality in patients with high admission CRP values, regimen of antibiotics and the timing of its start may have influenced outcome in some patients. Despite the moderate cohort size, data on the clinically suspected causes of death seem important.

It would also be helpful to know the mean time intervals between stroke onset and start of treatment, and the mean time intervals between stroke onset and CRP measurement.

Single measurement of laboratory values may either overestimate or underestimate the strength of the relationship of the potential predictor and the end point because of measurement errors and fluctuations of laboratory levels in individuals. The precision and reproducibility of inflammatory marker assays such as high-sensitivity CRP have been acceptable. However, there exists considerable within-individual variability for high-sensitivity CRP.3 Therefore, serial measurement of CRP may have shed additional light on the predictive value of pretreatment CRP on outcome.

Summing up, poststroke CRP has not yet been demonstrated to be a reliable predictor of mortality after thrombolysis, let alone a predictor of functional outcome beyond the prognosis of survival versus death.

Disclosures

None.

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