Reviewer's report

Title: Interleukin-10 facilitates selection of patients for systemic thrombolysis

Version: 2 Date: 24 October 2012

Reviewer: Brian Buck

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This is a prospective study to examine whether serum biomarkers in addition to neuroimaging can help identify patients most likely to benefit from intravenous tPA therapy.

Major Compulsory Revisions

1) The most important predictor of infarct growth and outcome is recanalization and reperfusion. It is possible that these biomarkers are a predictor of reperfusion after tPA? At what time point was the blood sample drawn? Were the samples drawn before or after tPA was administered? This data should be included in the results. Presumably these biomarkers change rapidly over time. Time from stroke onset to lab collection is important.

2) The explanation for why IL-10 levels predict good outcome is unclear. Is the suggestion that IL-10 is a more sensitive marker for penumbra then CDM and PDM? If so have the authors examined whether the degree of PDM is correlated with IL-10 levels. Later in the discussion there is the suggestion that IL-10 is neuroprotective and attenuates infarct growth. Other explanations should be considered. In this small sample it is unlikely that IL-10 would have such a strong neuroprotective effect. Again reperfusion/recanalization needs to be considered and this data presented if available.

3) No information is included about imaging methods, MRI sequences, software used to generate MTT maps. At the very least a reference to the methods in another paper by the group should be included.

4) If the authors are comparing CDM and PDM methods then the clinical characteristics of these two samples need to be included so important baseline differences can be better understood in relation to functional outcome.

5) There are a number of grammatical errors particularly in the discussion that need to be revised before the manuscript can be published. For example, the second paragraph of the discussion is difficult to follow and needs to be re-written.

Minor Essential Revisions

1) The abbreviation MTT is misspelled at MMT a number of times

2) Reference #8 is no longer in press and should be corrected

3) Page 6 refers to a table (e-1) that was not attached
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests