Reviewer’s report

Title: A new prognostic scale for the early prediction of ischemic stroke recovery mainly based on traditional Chinese medicine symptoms and NIHSS score: a retrospective cohort study

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Reviewer: Zilong Hao

Reviewer’s report:

In this retrospective cohort study, the authors develop a new scale to predict the 90-day outcome for stroke patients using NIHSS score, TCM symptoms and their changes during the first 3 days of stroke onset based on 489 patients. It is very interesting topic. However, I have some comments as follows:

Major Compulsory Revisions

1. Introduction should be succinct and focus.
2. The definition of serious illnesses, such as liver, kidney, hematopoietic system, endocrine system and osteoarthritis should be clarified.
3. As we known, in most large stroke clinical trials, mRS scale is the most used tool for evaluation of prognosis, why the author choose the BI?
4. According to the flowchart of patients recruitment, only 77% patients have full complete the outcome assessments, and it means 23% patients were excluded from the analysis due to incomplete data collection, so the results should be interpreted cautiously. Whether these patients more severe? Or more older? et al.
5. Are and NIHSS are the most important predictor of prognosis, the author should provide whether the TCM symptoms or TCM symptoms scores give more predictive value than age and NIHSS, but not combined them to evaluate. That means whether the TCM symptoms improve the prognostic value of age and NIHSS.
6. It seems that TCM symptoms be weighted more scores, such as change in circumrotating during the first 3 days [0 (disappear); 2 (keep); 4 (appear)], change in tinnitus during the first 3 days [0 (disappear); 2.5 (keep); 5 (appear)]. Please explain the rationality.

Minor Essential Revisions

1. How patients be recruited should be more detailed?
2. NIHSS, BI should be expressed using median.
3. Other prognostic scales should be discussed in the discussion.
4. Reference 30 is not China guideline for cerebrovascular disease prevention and treatment.
5. Diagnostic criteria of ischemic stroke should be listed, because the criteria is not familiar with the western countries.

Discretionary Revisions

1. Diagnostic criteria should be forward to data collection.
2. In the Exclusion criteria section, No.2,6,8 is unnecessary.
3. ‘However, 16 NIHSS score cannot replace TCM symptoms & signs completely in predicting outcome for stroke patients’ is not suitable.
4. Most references should be updated.

Level of interest: An article of limited interest

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.