Reviewer's report

Title: Circulating miR-30a, miR-126 and let-7b as biomarker for ischemic stroke in humans

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Reviewer: WEILI ZHANG

Reviewer's report:

In the present study, authors investigated the plasma concentrations of miR-30a, miR-126 and let-7b in patients with ischemic stroke at 24 hours, 4 weeks, 6 months and 1 year. The results showed that miR-30a, miR-126 and let-7b might be useful biomarkers for ischemic stroke within 6 months. In general, the study was interesting for evaluating the risk of ischemic stroke. The data analysis was logical and appropriate, and the manuscript was well-written. But, there are some issues needed to address.

Major Compulsory Revisions

1. In this study, were these stroke patients recruited and followed up as a longitudinal cohort and plasma concentrations of studied miRNAs measured as longitudinal data at different time point after the onset of stroke? Or, was this study a cross-sectional study at different time after stroke? Please clarify the study design in the Method section, and discuss the study limitation as well.

2. In the Table 3, how was the cut-off point of 3 candidate miRNAs specified? Please clarify it.

3. In the Figure 6, due to small sample size, the ROC seems not to be a good statistics for sensitivity and specificity. Please discuss this point.

4. Did the change of plasma miRNA concentrations add additional information of stroke compared to conventional risk factors, such as hypertension, dyslipidemia? Please provide relative ROC data.

5. Finally, the results showed that these 3 candidate miRNAs changed significantly within 6 months of the onset of stroke, but not longer time-point. What is the underlying mechanism? Where are circulating candidate miRNAs from and what kind of forms they exist in circulating blood? Please discuss it in details.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests.