Reviewer's report

Title: Ethnicity and thrombolysis in ischemic stroke: a hospital based study in Amsterdam

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Reviewer: Lynda Lisabeth

Reviewer's report:

This paper is well written and focuses on the important topic of disparities in tPA treatment. Suggestions for improvement are below.

Major Compulsory Revisions

1. The authors contacted patients via telephone to acquire missing data and a considerable proportion of cases had missing data as reported in the results. More detail is needed regarding the nature of this missing data. For example, it is not clear what data elements were missing and to what extent. It is also of interest to note whether missing data varied by ethnicity which could impact the validity of the study findings.

2. The authors combined data from various ethnic minorities into a single group because of sample size issues. Presumably the black and asian subgroups could vary considerably with respect to the potential confounding factors. The authors should at least provide the descriptive data regarding treatment rates by the ethnic subgroups.

3. The authors state that a 5% rule for determining confounding was used. Based on the data presented in table 4 it seems several other factors like gender and mild stroke fit the author’s criteria of confounding but were not described as such and therefore were not included in the multivariable model. This requires clarification.

4. An important aspect of confounding is the nature of the relationship between the confounding factor and the outcome of interest. In this regard it would be of interest to include a table of the associations between the various confounders and tPA treatment.

5. In the methods the author state that they used "stepwise" logistic regression but from the way the results are presented it does not appear to be the case - i.e., variables were selected for inclusion based on their confounding of the main association of interest. The approach utilized seems correct. I would recommend that the language regarding the stepwise approach be modified to reflect the actual analysis.

6. The authors provide an interesting analysis of potential explanations regarding the observed ethnicity association. If sample size permits it would be of interest
to see what happens to the ethnic association among the tPA eligible population. This would speak to other potential causes to ethnic differences in tPA treatment.

7. The authors state that their results are not impacted by insurance status. These statements are not clear. If insurance status varies by ethnicity then their is the potential for this factor to play a role.

Minor Essential Revisions

8. Several aspects of the abstract require further detail including: 1) explanation of what constitutes "non-white", 2) a few sentences regarding the statistical analysis methods, 3) clarification of the data presented in the results - are these means or medians, 4) what confounders were adjusted for in the multivariable model.

9. In the discussion, the authors raise the issue of ethnic differences in stroke awareness. There is a considerable body of literature on this topics that could be cited to support this line of discussion.

Discretionary Revisions

10. Do the authors have data on patient refusals or consent issues for tPA treatment? This data could provide an alternative angle to ethnic differences in treatment. If they do not this would be worth mentioning in the discussion.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.