Reviewer's report

Title: 5-year survival and hospitalization due to stroke recurrence among patients with hemorrhagic or ischemic strokes in Singapore

Version: 2 Date: 27 June 2013

Reviewer: Haralampos Milionis

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The authors of this study aimed at investigation post-stroke outcomes, namely 5-year survival and stroke recurrence, in stroke patients of Singapore.

By going through the manuscript several concerns are raised:

Major Compulsory Revisions:

Abstract
1. Background: No actual background in provided. Instead, the authors give a rather vague description of their objectives.
2. Results: The presentation of the results in this section is poor and non-informative.
3. Conclusions: The conclusions are not justified by the previously mentioned results and appear non-coherent.

Introduction
1. The description of the background is somewhat non-focused. In addition, expressions like “…high utilizer” and “…the results were with great variation” poorly describe what the authors mean. Language editing is advised for the whole manuscript.
2. The objective of the study or hypotheses should be stated in a clearer manner.

Methods
1. Additional outcomes like post-stroke dependence would strengthen the study design and subsequently enrich the results
2. Page 5, paragraph 3: Please explain what “IH” stands for?
3. The authors appear to have access only in demographic data. Useful information regarding clinical characteristics, laboratory evaluation, severity of stroke on presentation, medical treatment before index event, during hospitalization and post discharge, mRS prior and post-discharge etc. is lacking and these constitute major limitations to interpret. These pieces of information would be most instructive in IS, ICH, SAH individually.

Results
This section needs to be rewritten in a more easy-to-follow manner, i.e. making paragraphs to report relevant findings.
Figures
1. Figure legends do not convey clear messages. Abbreviations are a bit confusing.
2. Can the authors provide information whether the differences in figure 1 are significant between groups?
3. Figure 3 (and nor figure 4 as mistyped) could be represented in a table and the authors should provide p-values
4. Again, Figure 4 should be presented in a table and statistically significant differences should be indicated

Table 1.
1. Age should be given either as mean (SD) or median (range) depending on normal distribution.

Table 2.
1. The values regarding age are a bit confusion and the authors should modify their results for 5-year or 10-year increase of age
2. It appears that the crude or adjusted ratio for Malays is versus all others. Isn’t “others” a bit confusing in this analysis?
3. By stating year in table 2, the reader does not have any indication what the authors mean.

Discussion
1. Please comment on any discrepancies between your study and other studies and provide plausible reasons for any of these.
2. “All these factors...sampling frame”: Please make clear.
3. An explanation the authors provide is “…males had higher prevalence of DM, HTN, total cholesterol...”. However, their study lacks all of these parameters.
4. As mentioned earlier, significant information regarding clinical characteristics, and laboratory data, severity of stroke, medical treatment etc. is missing and weakens and implications the authors claim that their study may have.
5. In the conclusion section, based on their findings what would the authors suggest in order to provide “immediately appropriate managemen for ICH and SAH” and what does this study implicates as to the “secondary prevention” strategy of IS patients.

Level of interest: An article of limited interest

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

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