Reviewer’s report

Title: Ischemic stroke in Morocco: A systematic review

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Reviewer: Michael Mazya

Reviewer's report:

The authors report an extensive systematic review of a wide range of topics pertaining to ischemic stroke in Morocco - epidemiology, etiological distribution, care quality metrics such as frequency of IVT treatment, mortality, and even genetics etc. This is a very ambitious endeavor and the extent of the manuscript reflects the multitude of topics covered. It is rather unorthodox to pool all these questions together into one paper, more reminiscent of a small thesis, the core of a small monograph, or similar. However, it can be read as an extensive article as well, if the editors of BMC Neurology deem it appropriate. The authors should be commended for following the PRISMA guidelines for systematic reviews, including such modern components as registration of the protocol in PROSPERO, inclusion of the full PRISMA checklist, a flow diagram, and a full table of quality assessment of component studies. My specific recommendations follow:

1. Strongly recommend a professional English language editing service to be employed in order to improve legibility. The paper is quite fact-heavy, making a smoother reading experience all the more important.

2. Inclusion criteria: why was 2010 chosen as the first year for study inclusion?

3. Results, Table 5: the table should probably be re-named in English. Also, have the names of the hospitals (listed in the Location column) changed over the years, or do they simply need standardization? See "UHC Hassan II Fes" versus "CHU Hassan II Fes". Or are these two different locations?

4. Discussion (and throughout): there is not a single mention of atrial fibrillation in the manuscript. Is it a non-entity in Morocco? There is some evidence of a paucity of AFib screening in MENA countries, but to see no mention of one of the top risk factors for ischemic stroke in a review appears strange. Or is it obscured in the somewhat cryptic "cardiac disease" risk factor category? If so, it should be discussed as a limitation.

5. Discussion: in relating the findings of the present review to studies of stroke in the Middle East and North Africa (MENA), recommend that the authors compare their findings to two very recent multi-national publications from the region, based on the Safe Implementation of Treatments in Stroke - MENA (SITS-MENA) registry, one on a general stroke population and one on patients treated with IVT: Int J Stroke 2019 Oct;14(7):715-722 and Int J Stroke 2019 Oct 8:1747493019874729, both by Al Rukn et al.
6. Conclusions, line one: retiring the term "cerebrovascular accident" is long overdue, at least in English medical literature. A stroke is no more an accident than a myocardial infarction or an aortic dissection. However, for some strange reason, stroke is the only disease with an acute presentation, to earn the qualifier "accident", adding to mystification, a perception of inevitability, "nothing to be done" etc. Suggest reword.

7. Conclusions (and throughout the results): the authors point out that stroke studies in Morocco are mainly concentrated to cities with university hospitals. Meanwhile, there is no discussion of the possibility of bias which this pattern of study may introduce. In rural environments, often with higher average age and worse access to hospital care compared to cities, is it possible that older individuals with acute stroke would be taken to hospital to a lesser extent, thus skewing the epidemiology and etiological distribution? Could financial circumstances (government coverage / insurance / direct cost patterns) and resulting readiness to seek care influence the results of the studies? Recommend adding a section on limitations of the current study, as the possibility of these, and similar sources of potential bias (e.g. minor strokes not coming to medical attention) should be addressed.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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