Reviewer’s report

Title: Recurrent stroke risk is high after a single cerebrovascular event in patients with symptomatic 50-99% carotid stenosis: A cohort study

Version: 2 Date: 5 December 2013

Reviewer: Iacopo Barbetta

Reviewer’s report:

This is an observational study on the early-risk of ipsilateral stroke in patients with symptomatic carotid stenosis, according to the presence of recurrent ipsilateral ischemic events.

The design of the study is well done and authors’ conclusions are interesting.

Despite these merits, I would suggest to the authors to add some very relevant piece of information to their methods and results and to re-write in a more “reader-friendly” way their results, before publication.

MAJOR COMPULSORY REVISIONS

1) BACKGROUND: “The aim of this study was to explore if additional ipsilateral ischemic events are risk factors for RECURRENT IPSILATERAL ISCHEMIA BEFORE CEA, among patients with symptomatic 50-99% carotid stenosis”.

This sentence is not as clear as it should be (being the aim of the study). I suggest to rephrase it according to these remarks:

a) You show ipsilateral stroke as the outcome of your study in Table 2; you also say in the METHODS section that you used the same endpoint of your original study “recurrent ipsilateral ischemic stroke that occurs before CEA and within 90 days after the presenting event”. The use of “ipsilateral ischemia” in this sentence is misleading (as it may includes T.I.A. and A.F. as well).

b) Your endpoint are 7 and 90 days from the presenting event. Please state it in the sentence

c) You show (Table 1) that the majority, but not all, of your cohort underwent CEA within 90 days, so you should talk about “patients eligible to CEA”.

2) METHODS: “this was a select population of patients, preliminary eligible for CEA”.

You need to give us some piece of information about criteria of eligibility to CEA. Specifically you should mention which patients who suffered an ischemic stroke as a presenting event are included by surgeons or neurologists (NHISS score? Modified Rankin scale? Scandinavian Stroke Scale?...) If you have already done this in the ANSYSCAP study, please report the same amount of information in this paper.
3) RESULTS: “We analyzed the patients based on the number of ipsilateral events within 7 days before or after the presenting event”.

a) This sentence is clear, but presentation of your results is somehow confusing and very difficult to follow (I had to read it more than twice to get through your results). I would suggest to create a larger group of “Unstable patients”, defined as the sentence I quoted, and to show their results. Afterwards you can describe the subgroups of patients with ipsilateral events BEFORE and the subgroups of ipsilateral events AFTER the presenting event. Also rearrange Table 2 and Table 3 and present the results of the “unstable group” before the results of the 2 subgroups. I think that this could make your results more smooth and reader friendly.

MINOR ESSENTIAL REVISIONS

1) RESULTS: you discuss results of patients with # 2 additional ischemic event, those patients have the highest risk of recurrence (according to literature) and should benefit from very early CEA. What % of those patients underwent CEA before 7 days from presentation. This % is particularly important if you compare 7-days outcome of this subgroup with the other patients. If think that is possible to calculate this % in figures 5-6, but to see it in Table 1 would be very useful.

2) RESULTS: You saw a relatively high number of patient (47) with early recurrent stroke after a single presenting event. How many of these patients presenting after TIA/AF and how many after Ischemic Stroke / Retinal thrombosis?

2) TABLE 2: Please check and correct your % values in the Stroke column

3) FIGURES: Please add thorough descriptions to figures 3-4 and 5-6.

DISCRETIONARY REVISIONS

1) RESULTS: You did not report pre-CEA neurologic and overall mortality of your cohort. Please explain why (was it reported in the ANSYSCAP study?)

2) DISCUSSION: Why did you decide to differentiate patients with additional events Before and After the presenting events? What differences did you expect between these two subgroups (I would expect a difference in the timing of CEA, for instance….?) ? Please add a brief answer to your discussion

Level of interest: An article whose findings are important to those with closely related research interests

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