Reviewer's report

Title: Secular trends in aortic aneurysm- and dissection-related mortality in the state of Sao Paulo, Brazil, 1985-2009: multiple-cause-of-death analysis

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Reviewer: Stefan Acosta

Reviewer's report:

General comments:
The epidemiology is well described, but the conclusions drawn in the abstract are not really justified and seems not to fit to the study material. Aspects on economy has not been evaluated

Aortic aneurysm and dissection is not one of the leading causes of deaths, far from, as you have described in the introduction, and has been described in reports by the WHO. Please rephrase in the abstract, intro and conclusions.

Give background figures of all inhabitants in the state and those aged > 65 years of age (or your definition of older persons) during the study period in Methods. It would be helpful for better understanding of the studied population.

What was the total death number and the total death number in persons aged 65 years or older during the study ? I think the data is available but has not been clearly stated.

The limitation section in the discussion covers most aspects on limitations derived from administrative databases. However, is it possible to state an estimate on the autopsy rate in the population of the state of Sao Paulo ?

Which consequences would a high autopsy frequency have on the results of the present study. Most patients with aortic aneurysms do not die from their aneurysm, they die from co-morbidity, somewhat in contrast to the reported findings in this study. Please extend the discussion.

Specific comments:
The wording "secular" does not fit in the title.

In Results, line 5, these three age-standardized death rates corresponds to what ?

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