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: Janet Powell

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These are some interesting data, but some important features need addressing in any revised manuscript.

1 The authors have not attempted to evaluate, even with a small sample audit, how many of the secondary mentions of either aneurysm or dissection as causes of death relate to operative mortality (ie they have occurred within 30 days of an operation to repair). Frequently doctors will attribute deaths following operation to myocardial infarction, heart failure, multiorgan failure etc, when in reality the cause of death was the operation itself and therefore either aneurysm or dissection. This is a weakness of the current manuscript.

2 The authors must explain the dramatic changes in Figure 3 for the years 1995-6, Has there been a coding error or coding error?

3 The data in Figure 5 must be set against total deaths. What we need to know is whether the % of deaths attributable to aneurysm increases during the autumn and winter months, because it is likely that all deaths increase in the winter months.

4 The data in Figure 6 need to be age-standardised to enable interpretation.

5 The discussion is far too long and rambling, it needs to be cut by at least 50%. The observations must be discussed against recent reports from New Zealand, England and Scotland which show that the mortality from aortic aneurysms has been decreasing over the past 10 or more years.

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.