Reviewer's report

Title: Chlamydia pneumoniae infection and cerebrovascular disease: A systematic review and meta-analysis

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Reviewer: Bingzhen Cao

Reviewer's report:

Chen and co-workers present a systematic review and meta-analysis evaluating the association of C.pneumonia infection and cerebrovascular disease. We know, for decades, whether the C.pneumonia infection is an independent risk factor for arteriosclerotic disease is still in dispute. However, there has no specialized meta-analysis to evaluate the relationship between C.pneumonia infection and cerebrovascular disease before, as well as stroke subtypes. This study eventually enrolled 50 (nested) case-control and 2 prospective cohort studies. The authors critically appraise the association between serum anti-C.pneumoniae IgG#IgA#IgM#DNA and CV disease. Besides, they confirmed for the first time the association was strongest in a subtype of stroke with large atherosclerosis through a number of indicators. It further evaluated the probable reason of different results by different monitoring methods and provided some proofs to further study. Their statistical approach to the meta-analysis was sophisticated and well-done. However, the paper should be revised mildly and the following concerns should be addressed before publication:

1. The paper need to be improved grammatically. It had better consult an English speaking person and modify the text.

2. An upper date limit of literature search was September 2012, it is preferred to search the database again and add the latest studies if any. The latest reference can also be added.

3. In page 9, the author mentioned that "IgG antibody does not reach high title until 6 weeks after the onset of illness", which was in contradiction with the following sentence “an especially high level of IgG represents a current infection”, and they are hard to comprehend.

4. It is noted that there were two kinds of specialized methods, MIF and ELISA, to detect serum antibodies to the C.pneumonia#it is preferred to simply introduce the difference between them and the discuss the possible effects on the final conclusion, for the specificity and sensitivity maybe different between two methods.

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

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 interest