Reviewer's report

Title: Association of Circulating Chlamydia pneumoniae DNA with Cardiovascular Disease: A Systematic Review.

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Reviewer: Dr J Thomas Grayston

Level of interest: A paper whose findings are important to those with closely related research interests

Advice on publication: Unable to decide on acceptance or rejection until the authors have responded to the compulsory revisions

Review of manuscript by M. Smieja et al

The manuscript reviews in some detail 19 studies of the use of PCR for demonstration of C. pneumoniae in circulating white blood cells. This is a recent method for studying C. pneumoniae infection with the first publication being in 1998. The authors have made an extensive effort to determine all published and unpublished studies of this method. The 19 studies include many abstracts and one notable unpublished study.

Conclusions in the abstract are unrelated to results presented in the abstract. Conclusions in the manuscript are reasonable. The results section of the abstract could also be improved.

Season and smoking are not the only matching factors missing. Many were not matched for age and sex.

Regular journals would not accept unpublished data as similar to published studies. There could also be a question about the use of abstracts. It is unclear whether the abstract include enough data for comparison in meta-analysis.

The unpublished study is data from the author's laboratory. The authors need to bite the bullet concerning this 'outlier' study. It ordinarily would not be included in a review such as theirs. I can understand them being reluctant not to mention that they have an unpublished study that has results different that the other 9 with controls.

My recommendation is that this 'manuscript in preparation' ref 26 be removed from the tables and the compilations. Its potential effect on the results of the other 9 studies can be presented in the discussion.

I will add some unsolicited advice for the first author of the 'outlier' study that has results so different from other studies. Have someone separate from your laboratory, a senior colleague on the study or
a friend separate from the study; completely review all the patient, laboratory, and data compilation, identification numbers to be sure there was no inadvertent mix up. It happens, I know. I was fortunate enough to pick the error up before publication.

Blaming 'publication bias' for anything seems unlikely considering the search the authors made for unpublished data.

References 24 and 27 are duplicates.

My advice is that the manuscript should be published after suitable revision. The summaries of studies reviewed are of considerable value to persons with closely related research interests.

I have no conflicts of interest, financial or otherwise.

J. Thomas Grayston MD

**Competing interests:**

None declared.