Reviewer's report

Title: Smoking, dementia and cognitive decline in the elderly, a systematic review

Version: 1 Date: 19 February 2008

Reviewer: Chengxuan Qiu

Reviewer's report:

Evidence from prospective longitudinal studies has been increasing over the last decade that smoking may be a risk factor for dementia and Alzheimer disease. This systematic review is another effort trying to make conclusions on the relationship between smoking and dementia and cognitive decline by summarizing the evidence from the longitudinal studies. The topic is relevant for public health and for dementia prevention in particular.

-- Major Compulsory Revisions

Background

1. The Authors are encouraged to shift their focus in the Background section from biological mechanisms (nicotine receptors) and retrospective (case-control and cross-sectional) studies to the specific issues (smoking as a risk factor for dementia, subtype dementias, and cognitive decline from longitudinal and prospective studies), which they are going to address in this review.

2. The purposes of this review should be clearly specified.

Methods

1. What are the inclusion criteria of literature used for this review?

2. In the section of Methodological issues, the Authors are very much critical of many individual studies they reviewed in terms of the Study design and definition of Outcome. This may raise the question about the quality of the studies included in this review, and thus, about the validity of conclusions drawn by this review.

Conclusions/Discussion

1. The Authors may want to explain what the differences between this review and the previous meta-analysis are. It is also important to explicitly specify what additional information this review could provide, compared with the latest meta-analysis of the same topic (reference no. 20), and why this review is still imperative and relevant.

-- Minor Essential Revisions

1. Carefully editorial revisions throughout the manuscript are recommended. Here are a few examples, on page 2, One of the difficulties with are
Former smokers had lower risk than current smokers; Seven studies found a significant association; but those who did found an association.

2. The sentence starting No studies found on page 5 can be deleted.
3. The sentence in the bottom lines of page 6 is unclear.

-- Discretionary Revisions

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests.