Reviewer's report

Title: Stroke Risk and Poor Cognitive Function: A Population-Based Study

Version: 1 Date: 28 December 2007

Reviewer: Matti Viitanen

Reviewer's report:

This is an interesting article describing the association with stroke risk factor load and cognitive decline.

Background: The authors claim that risk factors for incident stroke such as smoking status and diabetes predispose older adults to cerebral white matter pathology, and biological aging is partly attributable to effects of cerebrovascular disease. Please explain what you mean with cerebral white matter pathology. I do not agree that biological aging is attributable to effects of cerebrovascular disease please explain.

Methods: With which examinations the stroke and dementia were excluded and how were stroke and dementia defined. Were the patients with mild cognitive impairment excluded? Were the silent cerebral infarctions included?

In the discussion asymptomatic cerebral infarction should be silent cerebral infarction.

Conclusion: Further research is necessary to establish whether 10-year stroke risk can be used to predict whether individuals will become demented in the future. I do not understand what you want to say dementia is only a stage of cognitive decline when the cognitive decline interferes significantly with work or usual social activities or relationships with others already mild cognitive deterioration interferes with work. Dementia definition works well in Alzheimer's disease but in cerebrovascular diseases where the patients have executive dysfunction and relatively intact memory the definition is almost useless especially in the epidemiological studies.

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

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