Reviewer’s report

Title: Atherosclerosis Profile and Incidence of Cardiovascular Events: A Population-based Survey

Version: 1 Date: 10 July 2009

Reviewer: Paul Holvoet

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The objectives of this study were to determine the cardiovascular risk factors correlating with self-reported subclinical atherosclerosis, and to assess which of these factors were associated with higher incidence of CVD events. Self-reported subclinical atherosclerosis was associated with expected risk factors, except for type 2 diabetes. Incident CVD was twice as high in respondents with subclinical atherosclerosis as in those without atherosclerosis.

Major compulsory revisions:
The following comments and questions should be addressed:

1) The main concern is that the study group is not representative for the general population, or that self-report underestimates the occurrence of subclinical atherosclerosis. Indeed, the prevalence of subclinical atherosclerosis in this study group (2.8%) is much lower than expected on the basis of mean age. In the Multi-ethnic Study of Atherosclerosis cohort (aged 45-84; mean age: 59, compared to 66 for participants who reported sub-clinical atherosclerosis) the prevalence of subclinical atherosclerosis was 34% based on plaque occurrence in carotid arteries with at least 25% stenosis, and even 42% on the basis of a positive Agatston calcium score.

2) Another concern is that participants did not have to report medication.

3) To determine the value of self-reported subclinical atherosclerosis for predicting incident CVD, the regression model should contain all respondents with incident CVD, and subclinical atherosclerosis, age, gender, geographic region, dyslipidemia, circulation problems, diabetes, hypertension, and smoking.

4) It is of interest to know which factors predicted incident CVD in respondents without self-reported subclinical atherosclerosis.

Minor essential revisions:
The following comments and questions should be addressed:

1) As discussed above, one should know how sub-clinical atherosclerosis was diagnosed.

2) Was dyslipidemia equal to hypercholesterolemia, or did respondents also report low HDL cholesterol and/or high triglycerides?

3) How were ‘circulation problems’ defined on the questionnaire?
4) Did family members report fatal CVD events?

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

**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'