Reviewer's report

Title: Osteopontin, asbestos exposure and pleural plaques: a cross-sectional study

Version: 2 Date: 8 November 2010

Reviewer: Tapio Vehmas

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Osteopontin, asbestos exposure and pleural plaques: a cross-sectional study

General: The topic is well targeted and the result is negative. It should be made better clear whether the associations found are due to the confounding effect of age. Some extra statistical work out is suggested. Limitations of the study should be better discussed. (all MCR)

Abstract: The results section gives some contradictory information. Reformulate "The explanatory variables with significant influence on Ostepontin were length of exposure (positive correlation) and time elapsed since last exposure (positive correlation)." to stand "In a multivariable regression model with backward elimination, the explanatory variables with significant independent influence on Osteopontin were length of exposure (positive correlation) and time elapsed since last exposure (positive correlation)." (MER)

Background:
The authors state: "The present investigation aims to assess the relationship between plasma OPN levels and asbestos exposure or presence of asbestos-related diseases...

Out of asbestos-related diseases, only pleural plaques have been studied. (DR)

Materials and methods:
How was asbestos (peak and cumulative) exposure assessed? (MCR)
Were there any collinearity problems between the independent variables? Was the frequency distribution of OPN close to normal? (MCR)

The authors have studied the relation between pleural plaques (as an indication of asbestos exposure) and OPN. Similarly interesting could be the relation between lung fibrosis and OPN. Do you have data on this? (DR)

How was current/former smoker defined? I.e. if the person smoked the latest cigarette one week ago, which category she/he belongs to? It is common to use pack-years as a cumulative measure of smoking. (MCR)

Commenting the analytical method of OPN is beyond my area of expertise.

Results:
Presented in a confusing way. Some information described here might better belong to the Materials and methods section (DR). I would like to see a table indicating bivariate regression coefficients between all independent variables and OPN. What happens if age is thereafter forced to such regression models as a single covariant? Will the significant relations between OPN and asbestos exposure disappear? Consider an extra table focusing on this. (MCR)

Table 3 may be somewhat irrelevant. Consider removal. (MER)

Fig. 2: Do not fit a line in the plot describing OPN and smoking class (the latter is not a continuous variable). The same probably holds true between OPN and peak exposure (only 3 classed described). (MER)

Discussion:
Is the 1st paragraph really necessary? Consider removal or shorten it (DR). Discussion is often started a short referral to main results (DR). Discuss the problems of your study not concentrating solely on OPN (MCR). The conclusion is OK.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
I declare that I have no competing interests.