Reviewer’s report

Title: Varicose Veins in Hairdressers and Associated Risk Factors: A Cross-sectional Study

Version: 6 Date: 17 April 2014

Reviewer: Steven Lamm

Reviewer’s report:

Major Compulsory Revisions:

This research report is of a cross-sectional study of members of the hairdressers union in southern Taiwan. It presents the results of a questionnaire survey directed to assess the risk factors for varicose veins, primarily prolonged standing at work. Surgery for varicose veins is a major problem for hairdressers, reducing their productivity and increasing their health care budget.

One-hundred eighty-two of an unspecified number of members of the hairdressers union participated in the survey, almost all of whom (91.2%) were women. Forty-four of the participants (24.2%) reported having varicose veins of the lower extremities. No analyses have been presented to assess whether the participants are reasonable representatives of the union membership. A case/control analysis (44 cases vs. 138 controls) was conducted which identified five risk factors in univariate analyses, three continuous variables [age, work duration, and monthly standing hours] and two categorical variables [Family history of varicose veins and Standing housework (Y/N)]. Childbirth numbers should be presented as a categorical rather than a continuous variable. It seems strange that 25% do no standing housework. Is the average duration of standing housework for all participants or for those who do any standing housework?

There is no description of the questionnaire indicting whether this is a validated questionnaire, whether it had been piloted. The questionnaire apparently did not include inquiries on smoking and alcohol history as other studies of varicose veins risk factors have.

Table 3 should be testing whether duration of work history is an independent risk factor separate from age, and it doesn’t.

Multivariate logistic regression is stratified as <= 45 y/o (Table 4) and > 45 y/o (Table 5). The rationale for this separation is not clear. For both those <= 45 y/o and those > 45 y/o, the average duration of work history for those with varicose veins is 1.19 that of those without varicose veins. Yes, the prevalence differs for an age-related phenomena [20% in <=45 y/o; 29% in >45 y/o], but the real break is at <=35 y/o. Rather age should have been added as a stratified variable in a single multivariate analysis.

The analysis of these data has to be re-thought before it is ready to be submitted.
for publication.

**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'