Reviewer's report

Title: Predictors of pain intensity and persistence in a prospective Italian cohort of patients with herpes zoster: relevance of smoking, trauma and antiviral therapy.

Version: 2 Date: 23 June 2010

Reviewer: Joanna Stewart

Reviewer's report:

Major
1. Clarify the outcome used in the Cox proportional hazards regression. Was it the time to disappearance of pain? Was this asked at a visit if they no longer had pain by that visit, or was it only recorded as not present at the 1 month, 3 month, 6 month, 12 month visit? The confusion became more on viewing table 3 where a result is reported for ‘Cox regression predicting time’ for 1 and 3 months. As it is at the 2 time points it would sound as if it was presence of pain at these times which was being modelled – ie logistic regression as used for the pain on presentation, rather than a survival analysis. As there will obviously be a high within person correlation among time points (1,3,6 and 12) the risk factors at the separate times would not want to be analysed individually. It would have been good to have reported a repeated measures analysis which could have investigated the interactions of the risk factors with time to see if in fact there was any evidence of a difference in factors influencing short or long term PHN. However if the multiple outcomes are only being incorporated into one analysis by use of the AUC, multiple individual time points should not be reported. If the data is available for a survival analysis then that would be looking at a different aspect from the AUC however how this was done needs to be clarified.

2. Table 1. As mention above, it is inappropriate to analyse the time points individually without first investigating whether the effect of the explanatory variables differ across time using a analysis appropriate for repeated measures, allowing for the within person correlation. If it is not analysed correctly it would be preferable to not report all these univariable analyses which add little to the raw data. Also the analysis for HZ dermatometric district and pain intensity should have been done as one analysis each – not as a separate analysis on each category of the response.

Minor
1. If, as stated in the methods, PHN as recorded at each visit was in fact the maximum since the previous visit, rather than at present then this needs to be made clearer in the interpretation of the data – ie those recorded as having PHN at 12 months may have had none for the previous 5 months??

2. Results, last paragraph. The reporting and testing of AUC for those with and without PHN at 1 and 3 months should be removed as by definition the AUC
must be related to this.

3. Discussion – first sentence – ‘in a totally independent study design’ needs removal or rewording to make it clear what is meant.

4. 2nd paragraph - says the proportion of patients with intense pain may have been underestimated if mild cases not reported – this seems the reverse – Do you mean overestimated??

5. Predictors of PHN section – half way down 1st paragraph – refers to ‘qualitatively’ – why? However this is also reporting the Cox regression which needs clarification throughout the paper.

Which journal?: Appropriate or potentially appropriate for BMC Medicine: an article of importance in its field

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

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