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: 4 Date: 24 August 2010

Reviewer: Joanna Stewart

Reviewer’s report:

Minor essential

1. Methods – data analysis. It is not clear in the methods or results whether the variables reported in the results were the only covariates included in the analysis or whether these were the subset of the initial variables included in the final model. If others were included it is important for the reader to know what variables were considered in the multivariable analysis and the list should be included in the methods.

2 Results

Numbers are reported followed by +or – a number. What this is needs to be explicit – if it is a sd it would be preferable to report it in brackets after the number as is done in table 1 – ie mean (SD) – again stating what it is. The terminology of +/-sd while quite common makes little sense – it is not a confidence interval.

While there has been a sentence put in the discussion about the effect of the way pain was asked on the calculation of the AUC and a sentence added to the methods it is still deceptive to the reader throughout the paper. It needs to be clear every time it is referred to that it is the maximum pain within a time period – not the pain at the end of the time – so for example rather than calling it pain at 3 months in should be pain from 1-3 months. It would be misleading for readers to look at figure one and use what you report as 12 months to provide an estimate of proportion who will be experiencing pain at 12 months when in fact this is the maximum pain from 6 to 12 months – a very different thing. The terminology therefore needs to be changed throughout the paper including the figure.

The addition of the repeated measures analysis, including the testing for interactions is a very welcome addition to the paper, however it is unfortunate that the individual tests at 1 and 3 months have been retained. They become redundant with the inclusion of the repeated measures analysis where no interactions could be demonstrated. This emphasises the fact that there is no evidence that the risk factors differ at the different time points and therefore it is only misleading to look at them separately. The repeated measures analysis is the method required to investigate whether these risk factors differed at different times. In their response the authors give the importance of doing this as a justification for reporting the separate analyses. This is not the case. The danger that the results will be misinterpreted is exemplified by the authors own reporting
of the 1 and 3 month analysis where they state that age and surgery were only significant at 1 month – the estimates for age are identical at 1 and 3 months – ie there certainly is no evidence that the effect was different at 1 and 3 months – as shown in the repeated measures analysis where no interaction was demonstrated. However the less numerate reader could well end up drawing the incorrect conclusion that age was only related to PHN of short duration. The only possible justification I can see to include these separate time points would be for comparison to other studies where only one or other of these points was reported. If this is the reason it would be better to report the repeated measure analysis as the first and therefore main analysis and simply report that for comparison you did run an analysis on 1 and 3 month data on their own and the variables that could be shown to be related remained the same (you could then still include the table if you considered it important for comparison but its importance would be downplayed).

Table 3 and 4 both have OR at the bottom but the column headings are still HR. Table 4 has some : rather than . in the values of the OR’s

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

**What next?**: Accept for publication in BMC Medicine after minor essential 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