Reviewer’s report

Title: Trigeminal Electrophysiology in Patients with Orofacial Pain and Temporomandibular Disorders

Version: 3 Date: 20 January 2010

Reviewer: James DeVocht

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Minor Essential Revisions

1. The Conclusions section in the Abstract does not really contain any conclusions

2. In MATERIALS AND METHODS, first paragraph, it was not stated just exactly what criteria were used to determine whether or not a specific participant had TMD.

3. When describing the technical nature of the jaw jerk reflex procedure, the EMG sampling rate should be given as well as the window width used for determining the peak-to-peak amplitude. How was it determined exactly where that window began for each data set.

4. In the first line of the second paragraph of DISCUSSION, symmetry is misspelled.

5. Toward the middle of the 3rd paragraph on page 10, skeletal (in connection with references 20 and 21) is misspelled as scheletal.

Discretionary Revisions

6. OP and TMD do not need to be defined again in Method of the Abstract when they were just defined in the paragraph immediately preceding that one.

7. At least in my mind, the term electrophysiologic tests is more general than just EMG (electromyography) and therefore it would be appropriate to specific that the voltages etc., mentioned to in the Method section of the Abstract, refer to EMG measurements.

8. In MATERIALS AND METHODS, the first paragraph ends with “electrophysical tests” but it would seem that “electrophysiological tests” would be more consistent with the Abstract as well as more accurate.

9. In the Jaw jerk reflex section of MATERIALS AND METHODS, just to make it clear that EMG recordings are being made, it would seem better to end the first sentence with something like “triggered recording of the EMG activity levels.” instead of “triggered a sweep of the recording traces.”
10. At the end of the Jaw jerk reflex section, it is mentioned that latency was not measured. If it is going to be mentioned, it should be defined. However, I see no point in mentioning it just to say that it was not measured. If there was some substantive reason why it was not measured, it would seem appropriate to tell what that reason is. If there is no really significant reason, just don’t mention it at all.

11. In the next to the last paragraph before RESULTS, it is stated that “The percentage differences between the ipJJ amplitude and the ipsilateral R-MEPs amplitude for each side were calculated but not reported in the tables.” That raises the question of why were they not reported? Again, if that is all that is going to be said, it would seem more appropriate not to mention that at all.

12. In the second paragraph of RESULTS, a degree of asymmetry in the TMD groups was declared to have a “statistically significant difference” when compared to the control group. I assume that is be taken to mean that the P-value is less than 0.05. That is the commonly held notion, but there is nothing magic or even universal about that value of 0.05. Therefore, it seems appropriate to explicitly state what is meant by a “statistically significant difference”.

13. When giving a P-value (as in Table 1), why not give the actual value rather than state that it is greater or less than some round number?

14. In the last paragraph of RESULTS, it seems to me that a reference, or some other basis should be given for determining what values were considered for the intervals given. Along that line, I didn’t really understand Table 3, but that could be more due to my unfamiliarity with that subject.

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests.