Reviewer's report

Title: Is tinnitus in normal-hearing patients accompanied by hemifacial spasm also a type of hyperactive neurovascular compression syndrome? A magnetoencephalography study

Version: 2 Date: 22 January 2013

Reviewer: Carlos Gordon

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Major comments

This is a study trying to clarify the source of certain type of tinnitus. Although the subject is interesting, the whole manuscript has several unclear points.

Background

1. Authors do not consider the issue of pulsatile tinnitus that is a type of tinnitus reported in several cases of neurovascular compression. The pathophysiology of pulsatile tinnitus due to vascular compression is obviously different to that of other types of tinnitus. Also, intermittent clicking is heard ipsilaterally in some cases of hemifacial spasms. In these cases the stapedius muscle may be affected.

Methods

2. Does "vascular conflict" means vascular compression of the facial nerve and auditory nerve? It is convenient to include the picture of the neurovascular compression in patient of figs 2.

3. Clarify the tinnitus characteristics/type for each patient (see comments in Background).

Results and discussion

4. I found the data presented in paragraph 2 of this section and in fig 1 unclear. A table showing all measures for patients with and without tinnitus is missing (Table 1?). Table 1 is also further cited in discussion: "MEG results of AEF…"

5. Consider to show values of normal controls also.

6. I found the whole discussion unclear. Authors must discuss studies on tinnitus using magnetoencephalography more than studies supporting the "central nervous system" origin of tinnitus. Unfortunately, lack of important data such as the type of patients' tinnitus, HFS treatment of each patient, follow-up including repeated MEG after treatment, do not permit to reach valid conclusions.

Minor point in discussion:

7. "Thus, we postulate that the pathophysiologic mechanism of tinnitus accompanied by HFS is different than that of tinnitus alone". This is obvious and needless.
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