Reviewer's report

**Title:** Central poststroke pain: somatosensory abnormalities and the presence of associated myofascial pain syndrome.

**Version:** 3  **Date:** 5 March 2012

**Reviewer:** Samar Hatem

**Reviewer's report:**

In this manuscript, the authors examined the incidence of myofascial trigger points in patients with post-stroke central pain. Myofascial pain syndrome (MPS) was found to be frequent after stroke associated with neuropathic pain symptoms. The authors suggest that MPS should be regarded as part of the heterogeneous clinical presentation of central post-stroke pain (CPSP).

This manuscript is well-conceived and clearly written. Methodology and statistics are sound. Pain after stroke presents a clinical challenge in terms of etiology and treatment. The data presented in this manuscript deal with the clinical recognition of muscular pain symptoms after stroke which is of obvious clinical interest.

Major compulsory revisions:

1. **Abstract:** I partially disagree with the conclusion of the abstract. MPS is certainly under-diagnosed in CPSP patients. However, in order to sustain that MPS is a part of the clinical presentation of CPSP, the authors should provide data indicating that MPS is not present in patients without CPSP… In this paper, there is no comparison between stroke patients with and without CPSP… Thus, it could be that MPS is not only part of the spectrum of clinical presentation of CPSP, but that MPS is actually present in stroke patients without neuropathic pain symptoms at all. Less than 20% of patients have true central pain after stroke (CPSP), i.e. pain that can be considered exclusively neuropathic (Hansson 2004, Anderson et al. 1995). The rest of the patients is not pain-free, but may present nociceptive pain, such as MPS. The conclusion of the abstract and of the manuscript should be rephrased.

2. **Results and Discussion:** Shoulder-hand syndrome is not caused by the immobilization, but by the motor paresis of the shoulder which leads to glenohumeral joint subluxation. Immobilization is avoided in stroke rehabilitation.

3. **Results and Discussion:** Concerning depression and antidepressant agents: recent studies have shown that antidepressant drugs such as paroxetin increase motor recovery and functional status in stroke patients. Thus, treating depression does not only improve the quality of life of patients but also the functional outcome (Paolucci et al. 2001; Loubinoux et al. 2002; and several other papers). In particular, the effect of antidepressants on MPS after stroke should be examined.

4. **Conclusion:** as explained in comment #1, I would rather prefer to read that the
following in the conclusion “The presence of MPS is not an exception after stroke and may present in association with central post-stroke pain”.

Minor essential revisions:
5. Methods: Could the authors clarify the definition of MPS: what is meant by ‘identical characteristic, referred pattern’?
6. Results and Discussion: How much time had passed since the last stroke event in the patients population? Were there any recent lesions on diffusion MRI?
7. According to the authors, is there any explanation for the preferential localization of trigger points above the pelvic girdle? Why were so few muscles of the lower limb examined?
8. Table 1: Could the authors explain what is meant by ‘undetermined’? Was the brain imagery unavailable? This is unfortunate because this subgroup presents with MPS in more than half of cases.

Minor issues not for publication:
1. Title: ‘somatossensory’ should be ‘somatosensory’
2. Abstract: ‘classed’ should be ‘classified’
3. Methods: ‘stroke’ should be ‘stroked’
4. Methods: ‘CSPS’ should be ‘CPSP’
5. Methods: ‘marked and a human body’ should be ‘marked on a human body’
6. Methods: ‘Brain MRI’ instead of ‘Head MRI’
7. Results and Discussion: ‘intensity of more severe’ should be ‘intensity or more severe’
8. Table 3: ‘bracqioradialis’ should be ‘brachioradialis’
9. Results and Discussion: ‘finding that in 4 of the 8’ should be ‘finding that 4 of the 8’
10. Results and Discussion: ‘infarct’ should be ‘infarction’
11. References: #9 ‘centrl’ should be ‘central’
12. Figures 1: ‘miofascial’ should be ‘myofascial’
13. Figure 1 was too small and with bad resolution. I couldn’t find out where the trigger points (+) were on the picture. Could this be improved?

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'