Reviewer’s report

Title: Treatment of Myofascial Trigger Points in Patients with Chronic Shoulder Pain: A Randomized Controlled Trial

Version: 1 Date: 29 October 2010

Reviewer: Martin Descarreaux

Reviewer’s report:

Report on manuscript: Treatment of Myofascial Trigger Points in Patients with Chronic Shoulder Pain; A Randomized Controlled Trial.

General comments:
The manuscript presents results from a RCT designed to compare a global intervention for treating trigger points versus a no intervention strategy. The study seems to be properly designed and complies with most of the Consort statement on reporting randomised trial. The statistical section of the methods however is not clearly presented and it seems like the authors have confounded the different analyses performed. The manuscript would also need some English editing. I have provided some comments as a reviewer regarding editing but the author should consult with someone whose first language is English. I am not sure the study is of general interest for the readership of BMC medicine but it would definitely be appropriate for BMC musculoskeletal disorders.

Major Compulsory Revisions

Abstract: The overall treatment strategy should be explained in the abstract. Otherwise the potential reader could assume that only ischemic therapy was performed. The treatment strategy should also be reflected upon in the conclusion section of the abstract.

Background: A clear hypothesis should be stated in the background section.

Methods: The authors mention that a “set of self-administered questionnaire were used in the evaluation of the participants”. However these outcomes are not defined clearly neither their use nor purposes in the current study. Were these questionnaires the ones used to create table 1. Please specify.

Methods: the randomization section is clear to me. However there is no clear mention of the concealment strategy described in the manuscript. The strategy implemented to conceal the sequence until interventions is assigned needs to be described.

Methods: The precise nature of the prescribe exercises and ergonomic advice needs to be detailed in order to be clinically relevant for the clinician and research communities. Illustration may be helpful if permitted by the journal.

Methods and results: the authors do not properly address the issue of possible co-interventions. Were they controlled, avoided, taken into account? The authors
need to expand on this important issue. The allowed and uncontrolled self management strategy poses some risks. The authors should clearly justify their choice and its possible impact on the study results and the overall generalization of their data.

Methods: the intention-to-treat strategy (preferred method) should be stated and clearly described.

Discussion: Overall the discussion is well written and comprehensive. I would suggest the author discuss the following points.
- The possible impact of having an underpowered study.
- Is there a possible bias associated with the high rate of observers’ capability to identify the group?

Minor Essential Revisions
- Background: A reference is needed for the last sentence of the second paragraph (definition of myofascial trigger points)
- Background: There is a syntax error in the last sentence of the third paragraph (Although….but the clinical).
- Background: There is also a syntax error in the first sentence of the fourth paragraph. …and may be combined refers to the MTrPs at the beginning of the sentence. The authors should make two sentences out of it.
- Background: Even though the study by Hains is a small scale clinically based study, the author should reference the study in the introduction so the reader gets a full perspective of what was previously published on that topic.
- The objective should be rewritten to simplify the sentence. The author might consider two sentences again.
- Methods: what is the “physical therapy practice for Neck, Shoulder, and Upper Extremity Disorders, Groningen, The Netherlands”. Is this the full name of a clinic or the name and the location, please specify. The use of capital letter seems to be arbitrary in the name.
- Methods: … since direct access to physical therapy became available in the Netherlands in November 2006. Not relevant to the study.
- Methods: The total number of palpated muscle should be stated in the data assessment section.
- Methods: The PDF transformation seems to have altered the text and mathematical symbols related to the stats, please verify. In this section, it is not clear which variables were normally distributed and which were not and this should be clarified. The statistical analyses for VAS-P, ROM and number of muscle are not clearly described. This lack of description creates confusion in the results section. The author should specify what statistical analyses were performed for each of the variable and organize the results section so the reader can identify the results associated with each of the analysis.
- I am wondering if the number of muscle variable is normally distributed (probably not). Clarifications are needed.
Results: The author should clearly state if the group were comparable for each of the baseline characteristics.

Results: As stated in the introductory comment it looks like a ANCOVA was performed but the author talk about multiple linear regression while comparing results between groups. This is very confusing and clarifications are needed regarding the ANOVA model used, the ANCOVA (with covariables defined). Sentences like “Adding covariates did not change this result” are very confusing.

Again, correlation analyses, not described in the methods section are presented in the results section.

Discussion: relative risks (RR) should be defined and abbreviated the first time.

Discretionary Revisions

Methods - Randomization section: After collection of all patient’s data…

Methods: I would change the “intervention/control variable” to the “group variable”

Discussion: I don’t believe the expression “were higher educated” is appropriate. I would suggest the participants had a higher level of education.

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

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests