Reviewer's report

Title: High prevalence of myofascial trigger points in patients with shoulder pain.

Version: 2 Date: 26 September 2010

Reviewer: Johannes Fleckenstein

Reviewer's report:

Dear Mrs. Bron and colleagues,

Thank you very much for this interesting and innovative work on myofascial pain. It is of great interest. To my knowledge this is the first trial correlating myofascial trigger points to a specific myofascial pain syndrome. Your aim of research is actually well described, a thread through your manuscript is unfortunately missing. The used methods are appropriately described. The chronology is not yet consistent. There are minor lacks adhering your findings to relevant standards for reporting trials. In my opinion, this work should find place in BMC Musculoskeletal Disorders, but there are some revisions to be made prior to publication.

Major Revisions:

1) The literary style of your manuscript is somehow confusing. Please check the consort statement http://www.consort-statement.org/ for reporting clinical trials. The CONSORT Statement is intended to improve the reporting of a randomized controlled trial (RCT), enabling readers to understand a trial's design, conduct, analysis and interpretation, and to assess the validity of its results. It emphasizes that this can only be achieved through complete transparency from authors. Please improve your manuscript in this regard.

2) Abstract: Your abstract is somehow unstructured and hard to understand. I strongly recommend to review the manuscript according to the structuring you made within your article, e.g. the methods part should point out the chosen study design (embedded in a clinical trial) including the examination of triggerpoints as main outcome.

3) Introduction:

a. Please rearrange chronologically the mentioned topics: Prevalence, pathophysiology, MTrPs treatments, clinical challenge et cetera.

b. The concept of MTrPs is not well described. Inexperienced readers will not understand the clinical importance of the finding of myofascial triggerpoints. In this context you will have to explain the difference between active and latent MTrPs.

c. MTrPs may offer an alternative model to understand the pathophysiological mechanisms underlying shoulder pain.

This is scientifically not correct. Triggerpoints are not a model. They are a proven
anatomical and (patho-) physiological correlate in the definition of myofascial pain syndromes.

d. There are too many cited articles (n = 61). Please focus on the most important articles supporting your statements. Literature does not include important recent articles from 2010 (including BMC series).

4) Material and Methods:

a. Measures: Please reorder the description of your outcome measures. Main outcome was the prevalence of MTrPs.

5) Results

a. Prevalence of myofascial trigger points per subject

i) This part is very interesting and important but highly confusing. It is not to understand, which median number is mentioned throughout the paragraph. I suggest to reorder your statements, e.g.

"Muscles containing active MTrPs were found in all 72 subjects. The median number of muscles with active MTrPs was 6 (range 1 to 14). Muscles containing latent MTrPs were found in …. Subjects. The median number was …. (range…). Figure 2 shows the distribution of the amount of muscles with active or latent triggerpoints over all 72 subjects. MTrPs were not normally distributed (Shapiro Wilk test; W=0.95; p < 0.05)."

ii) In the same paragraph you first indicate the range of muscles with active triggerpoints between 8 subjects with 1 muscle and 1 subject with 14 muscles. At the end of the paragraph there is a total number of MTrPs (active or latent??) between 1 and 16. Your figure indicates a range between 1 and 16, too. Please check that.

b. Prevalence of myofascial trigger points per muscle

i) Please revise this paragraph for legibility (see 5.a)

c. DASH_DLV, VAS-P, BDI, PROM

i) Normality of data should always be mentioned at the end of the respective paragraph. It should not be your main statement.

ii) Please separate the questionnaires / measures in your text layout, too.

d. Correlation

i) Please present a descriptive figure of the data (e.g. a Scatterplot of DASH vs. amount of muscles / MTrPs)

6) Discussion: no major revisions required.

7) References: The total number of cited references is too high. Please shorten the list to relevant publications with key results regarding your topic. Please consider key findings published in 2010. Please check references for style and duplicates (e.g. ref 62 and 73)

8) Figures

a. Figure 2 and 3 need labelling at x- and y-axis (e.g. amount of muscles vs. amount of active or latent MTrPs).
Minor Revisions:

1) Abstract
   a. Shoulder pain is reported to be highly prevalent, partly because it tends to be recurrent or persistent despite medical treatment.
   
   This conclusion is misleading. Prevalence and aetiology are different aspects of a disease.
   
   b. The aim of the study was to assess the prevalence of muscles with MTrPs and their potential impact in patients with chronic non-traumatic unilateral shoulder complaints.
   
   Throughout your work, you only assess the prevalence of MTrPs and their correlation to Pain questionnaires. There is no aspect in your work dealing with their impact on shoulder complaints (it is an assumption you make) – the aspect of their potential aspect is not mentioned in your methods nor in your results section of the manuscript.

2) Generalizability
   a. This aspect is important for clinical implications. Nevertheless, it is neither the main paragraph of the methods nor the discussions section.

3) Discussion
   a. Please reorder the discussion of your results. In my opinion, the clinical findings of MTrPs such as the clinical implications regarding treatment options are more important than the median scores and correlations with the questionnaires.
   
   b. You could be even more detailed in the presentation of clinical treatments targeting MTrPs.
   
   c. Please place in the methods part too, that you performed a sample size estimation prior to inclusion.
   
   d. A strength or limitation would be the amount of examiners used in your trial.
   
   e. Another limitation is that you only examined the prevalence of triggerpoints, but not, if immediate treatment would have changed the painful scores and condition

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests