Reviewer's report

Title: Prevalence and site of muscle tenderness in adults with nonspecific neck/shoulder pain

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Reviewer: Hilla Sarig Bahat

Reviewer's report:

Manual palpation and muscle tenderness are traditional issues which have been clinically assessed for many years. It is therefore highly important to evaluate these issues in relation to neck pain - an increasing health problem. However, this paper has great limitations in between its methodology and conclusions.

Main areas for improvement in this paper are:

1. There was no comparison to a control group.

We know trigger points, i.e. tender points in muscles, exist normally in the human body. In order to conclude that tenderness in specific muscles is associated with neck pain one needs to show that this tenderness is significantly increased in patients with neck pain compared to the level existing in asymptomatic individuals.

2. The method in which tenderness was evaluated was subjective and of questionable reliability.

Pressure algometry is an existing method for evaluating local tenderness, which was used in multiple studies. I see no justification in using a non-based manual evaluation where we have already based in research a reliable and valid methodology. The author cited a reliability study, which evaluated a different population (elderly). In order to judge the quality of the reliability base, I would be happy to review the cited papers in order to decide whether they provide a valid base to choose the described methodology. Unlike trigger points' studies, which indicate a selective site of tenderness in the muscle, it seems that this methodology includes palpation of the whole muscle, which is decreasing the chance for good repeatability.

I agree that palpation and tenderness are very important issues in manual therapy. Research aims to evaluate our clinical techniques and provide validated and reliable tools for us the clinicians.

3. There was no use of standard outcome measures accepted in neck pain, such as the Neck Disability Index, VAS for pain rating, fear avoidance questionnaire, and cervical ROM - the most common objective measure associated with neck pain.

Specific issues: the copy I downloaded has no line numbers, so I will do my best in describing the locations.
Introduction, 2nd para- was tenderness correlated with pain and disability?
Ref 10-14 should be inserted specifically in their relevant location.
The conclusion at the bottom of p 3 is biased and not well based on literature.
Page 4: inclusion criteria is not well defined- what is the duration included? Level of pain>2 how was it measured? VAS?,
At the bottom of p.4 you describe the use of Spurling's test for eliminating radiculopathy- was this an exclusion criteria- if yes, write so.
Page 5: Disc herniation- how was this evaluated? CT?
Examination- who were the examiners, how many? What qualification?
Please send me ref 8 to understand if it established inter-rater reliability.
I understand the examiners practiced with a grip dynamometer, but practically the evaluation was manual, so how did the dynamometer contribute to validate the method?
Bottom p5- be careful with interpretation- ICC of 0.88 is not excellent.
Statistics- please specify exactly the various comparisons, and cluster analysis methods used. Define what you mean by sites and sides as you interchange them frequently.
Results- I feel the results need further details as to each test performed.
P8- lack of scientific base for anatomical description
I find it hard to see the correlation between the tables and the conclusions in the discussion.
P9: the 1st paragraph lacks evidential base- add ref. to each statement.
2nd paragraph, I see you are aware to pressure algometry, and I would like to know why you chose not to use it. This choice weakened your methodology.
Middle paragraph is unclear to me and needs editing. Its conclusion for rehab is weak.

Level of interest: An article of limited interest

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

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'