Reviewer’s report

Title: The relationship between chronic type III acromioclavicular joint dislocation and cervical spine symptoms

Version: 1 Date: 19 June 2009

Reviewer: Matthew Richardson

Reviewer’s report:

1. Is the question posed by the authors well defined?

   - Major Compulsory Revisions

   Evidence needs to be gathered regarding known effects of trapezius dysfunction. The paper does not provide such background evidence and requires supposition regarding the trapezius and dysfunction of adjacent structures regardless of acromioclavicular joint involvement.

   The shoulder function, as it pertains to treatment method for the AC dislocation, is mentioned (conservative vs. surgical intervention) in the background section of the manuscript. This information seems out of place and of questionable utility. All members of the study group were treated conservatively. Should there be a statement regarding “conservatively managed type III AC dislocations and cervical spine symptoms?”

   - Minor Essential Revisions

   - Discretionary Revisions

2. Are the methods appropriate and well described?

   - Major Compulsory Revisions

   Clear description of the criteria the authors are using to determine dysfunction needs to be made.

   Radiographic assessment of the cervical spine appears to have been performed in an effort to analyze the region for degenerative disc disease. In the discussion section of the paper the authors draw into question the relevance of this condition as it pertains to symptoms. Further evidence needs to be provided regarding the validity of assessment of degenerative disease as a component of cervical spine dysfunction/pain.

   There has been apparent use of x-ray examination on all participants in the study regardless of clinical indicators of cervical spine dysfunction. This needs to be addressed, as said use of radiographic examination is not supported by the literature. Additionally, there is no reference to IRB approval. As this study was
not performed in the United States, there may not be need for such approval; however, there may be a requirement for IRB approval to be published in BMC.

Participant demographics needs further elaboration for both the study and control groups.

Line 113 – References are needed for the statement “These criteria have been regarded as the best available for epidemiologic researches and have been used in large cross-sectional studies.”

Lines 130-131 say “A nine five-part section questionnaire checked the patient’s symptoms and a score was obtained.” This line is confusing. Please reword for clarification.

The significance of the cervical lordosis is an area of much debate. Additional references in this area are warranted. Lordosis measurements less than twenty degrees are reported in some series without associated complaint.

Both the Cobb angle measurement and Harrison posterior tangent method are discussed in the paper as ways to measure the cervical lordosis (lines 198-201). The Harrison method is not employed in this study to assess the cervical lordosis, and the need for its mention is unclear.

- Minor Essential Revisions

The values for establishing osteophytosis and disc space narrowing appear to be arbitrarily set by Hayashi et al as it is described in their paper. Careful review of the article is warranted for correlation. Additional literature may be needed to establish these values as a reference standard.

- Discretionary Revisions

3. Are the data sound?

- Major Compulsory Revisions

The initial paragraph reporting participant demographics is unclear. Revised phrasing is needed.

- Minor Essential Revisions

- Discretionary Revisions

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

- Major Compulsory Revisions

Reference numbers are incorrect within the paper. Examples include: Line 112 –
The reference number at the end of this line is incorrect. The correct reference is the paper by Hayashi et al (reference 9). Also see line 322. Careful review of the manuscript is needed to address this issue.

- Minor Essential Revisions

Figure 1 and Figure 2 are not needed to convey that the study and control groups are not significantly different regarding levels of disc narrowing and osteophytosis. Consider removing the figures from the manuscript.

- Discretionary Revisions

5. Are the discussion and conclusions well balanced and adequately supported by the data?

- Major Compulsory Revisions

The conclusions listed in the abstract are not matched to the question posed on the abstract’s “background” section. The study did not initially question the possibility that chronic type III AC dislocations interfered with disc narrowing or osteophyte formation.

The significance of the cervical lordosis is an area of much debate. Additional references in this area are warranted. Lordosis measurements less than twenty degrees are reported in some series without associated pain complaint or dysfunction.

Correlation between degenerative changes and spine pain/function is not well supported in the literature. Lines 193 through 196 make a similar statement. Further information needs to be provided to clarify the author’s decision to assess this parameter of the study. Without this, the data and discussion may need to be omitted from the manuscript.

The link between upper trapezius tightness and neck pain in office workers to type III AC sprain with trapezius injury is unclear.

Discussion of the normal musculature responsible for maintaining the cervical lordosis is needed. Special address of the trapezius in this capacity is needed, as the actions of the trapezius are generally limited to scapular motion.

- Minor Essential Revisions

- Discretionary Revisions

6. Are limitations of the work clearly stated?

- Major Compulsory Revisions

Lack of data regarding EMG assessment of the trapezius would best be clearly
marked in the section for limitations of the study.

The statement regarding degenerative changes in the spine on lines 238 and 239 indicates the authors were using this as criteria for assessment of dysfunction. This subject needs to be consistent throughout the paper regarding its significance.

- Minor Essential Revisions

- Discretionary Revisions

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?

No works acknowledged. Correlation by the authors is recommended.

8. Do the title and abstract accurately convey what has been found?

- Major Compulsory Revisions

Clarity needs to be provided regarding the phrase “cervical spine symptoms.”

- Minor Essential Revisions

- Discretionary Revisions

9. Is the writing acceptable?

- Major Compulsory Revisions

The paper contains significant numbers of grammatical mistakes. Consultation with an advisor on proper use of grammar and punctuation may be needed. Utilization of paragraphing needs to be reevaluated. For example, in lines 109-120, the ideas of degenerative disc disease and the cervical lordosis are both discussed. This situation necessitates the use of separate paragraphs. A similar situation exists in lines 162-167 with NPQ and cervical lordosis values. Conversely, single sentence paragraphs (line 127) are uncommon with the sentence usually being incorporated into an adjacent paragraph with similar content.

- Minor Essential Revisions

Line 220 – the word “proved” is inaccurate. Perhaps “indicated” or something similar would be appropriate? Check for similar word usage throughout the manuscript.
Figure 1 contains spelling errors and inconsistent use of punctuation. Revise where appropriate.

- Discretionary Revisions

The active voice is generally stressed over the passive voice in manuscript writing.

**Level of interest:** An article of importance in its field

**Quality of written English:** Not suitable for publication unless extensively edited

**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.