Author's response to reviews

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

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Author's response to reviews: see over
Cover letter.

Dear Editor, thank you very much for giving us the possibility to review our manuscript entitled: The relationship between chronic type III acromioclavicular dislocation and cervical spine pain. We appreciated very much the suggestions and comments of the reviewers who showed a particular competence on this field. However, we hope we have satisfied all referees’ request. We strongly hope that our manuscript is now suitable for publication in the prestigious “BMC Musculoskeletal Disorders”.

Best personal regards,
Stefano Gumina (MD, PhD).

Reviewer 3:
major compulsory revision: back ground.
- We cited the most important and recent meta-analysis regarding the relationship between neck-shoulder pain and trapezius dysfunction.

- Treatment of type III AC dislocation is still a motive for discussion. Patients have to be informed on consequences related to conservative treatment. Therefore, we believe that a description of advantages and disadvantages of each type of treatment represent a good introduction to our study. However, we added the statement suggested by the reviewer.

major compulsory revision: material and methods.
- the suggestion is unclear. Is it referred to type III AC dislocation? If it is, we have just described how the diagnosis is formulated; however, characteristics of type III AC separation are universally known and accepted. Instead, if it referred to trapezius dysfunction, we are sorry but it is the subject of a further study. In fact we have only hypothesized the relationship between neck-shoulder pain and trapezius dysfunction.
- further evidences......: we have clarified these evidences in the Discussion section (see Hayashi et al. and Yin and Bogduk’s papers).
- IRB approval: The local Ethic Committee approved our study (File IRB approval).
- participant demographics are fully described on result section.
- line 120: we added further references (in the discussion section) that consider about 27° of lordosis as a threshold value
- line 130-131: we corrected the sentence as suggested.
- line 198-201: Harrison method was cited in the discussion section; we believe that it may complete the discussion.

Minor Essential revision: results.
- We added a reference (Gore et al. Roentgenographic Findings of the Cervical Spine in Asymptomatic People. Spine 1987) as further information that justifies the use of these values as a reference standard.

Are the data sound?
- The initial paragraph reporting participant demographics has been corrected.

Does the manuscript adhere…….?
- References have been corrected.
- we have left the figures because other reviewers did not suggest to remove them.

Are the discussion and conclusion well…..?
- The abstract background section has been corrected
- We agree with the reviewer that the significance of the cervical lordosis is an area of much debate. However, utilized references are usually considered as historic manuscripts; therefore we believe that they are sufficient. Furthermore, other references on the cervical lordosis could be excessive with respect to the AC dislocation that represent the main subject of this manuscript.
- we added further recent information that supports a scarce correlation between degenerative changes and spine pain/function.
- we removed the sentence relative to the link between upper trapezius tightness and neck pain in office workers to type III AC sprain.
- we added a sentence about normal musculature responsible for maintaining the cervical lordosis.

Are limitations of the work clearly stated?
- we added a sentence on the lack of data regarding EMG assessment of the trapezius.
- lines 238-239. We used the term “relatively small”. We perfectly know that degenerative changes would be more evident in the future. However, we believe that 3 years are a long enough time.

Do the title and abstract accurately………?
- we removed the term “cervical symptoms” and added “cervical pain” (title and abstract).

Is the writing acceptable?
- we corrected the grammar mistakes.
- lines 109-120: the ideas of degenerative disc disease and the cervical lordosis are discussed in two different paragraphs (as suggested)
- lines 162-167: the ideas of NPQ and the cervical lordosis are discussed in two different paragraphs (as suggested).
- line 127: the sentence has been incorporated into the previous paragraph.
- line 220. we removed the verb “proved” and added “indicated”
- Fig.1 has been corrected.
- The active voice is……… We tried to correct it.

Reviewer 4

How the authors assure that there was no injury to the cervical spine at the time of the injury to the AC joint?
- we added the sentence: None of the patients referred about a cervical spine injury concomitant or preceding to the shoulder trauma.

Additionally, does the use of the conservative treatment influence the cervical lordosis? And “I strongly suspect that…..
- we have a mean follow up of 38 months. We believe that eventual hypolordosis consequent to the sling or figure eight splint is transitory and usually it disappears in 3-4 months.

Minor essential revision
Inverse correlation means that when the lordosis decreases the NPQ score increases. The statistical analysis was performed by a Professor of Statistics (ARV).
Furthermore, we believe that information on degenerative changes is necessary.
Reviewer 2

The sentence with “was found” has been corrected

Fig. 4b: We added the sentence “Note that the current scale is different with respect to the Fig. 4a.”.
Fig. 5b. We added the sentence “Note that the current scale is different with respect to the Fig. 5a”.

- Treatment of type III AC dislocation is still a motive for discussion. Patients have to be informed on consequences related to conservative treatment. Therefore, we believe that a description of advantages and disadvantages of each type of treatment represents a good introduction to our study. However, we added the statement suggested by the reviewer n° 3.

How did you decide to stop after 34 consecutive patients?
- we decided to considering only the patients who sustained an AC dislocation within a definite time.
- In the material and methods section, we have written “before and after dichotomisation based on the mean lordosis value, data were analysed with the Chi-Square test.”
- We have written “p value ranging from…” Because the studied parameters in the two groups are several (C2-C3, C3-C4, etc.).

Reviewer 1
We submitted the manuscript to a mother tongue English speaker to correct awkward terms