Reviewer’s report

Title: The gait pattern is not impaired in patients with external snapping hip: a comparative cross-sectional study

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Reviewer: David Krause

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BMC Musculoskeletal Disorders
Manuscript Review

'The gait pattern is not impaired in patients with external snapping hip: a comparative cross-sectional study'

1. Is the question posed by the authors well defined? Yes
2. Are the methods appropriate and well described? Methods are not well described. The power of the study appears to be an issue
3. Are the data sound? Kinetic data is presented but not discussed
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? Yes
5. Are the discussion and conclusions well balanced and adequately supported by the data? It appears some conclusions are misleading with references to previous works a misleading. Further discussion is necessary to clarify. Conclusions are compromised by the methodology.
6. Are limitations of the work clearly stated? yes
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes
8. Do the title and abstract accurately convey what has been found? Conclusion is not clear
9. Is the writing acceptable? Yes

Discretionary Revisions
Design – a measure of leg length would be helpful.

Minor Essential Revisions
Background. 1st paragraph. Clinical experience indicates a high prevalence. This needs a reference.
Background 2nd paragraph. Association has never been documented? Are you sure? I think safer to say you did not find the association reported.
Background. 2nd paragraph – Other factors such as leg length, ITB tightness, foot mechanics can contribute. Addition of leg length measurement would have been a good addition to your methods.
Background 3rd paragraph, 2nd sentence needs a reference.

Background 4th paragraph. This paragraph is not clear.

Methods – who is making the diagnosis? Is it the same clinician for each subject? What is their background?

Design and procedure – Explain in more detail the nature of parallel studies.

Gait analysis – please describe electrode placement and skin prep.

Data processing- please provide a reference or justify your normalization procedure. Why did you not use MVIC?

Methods – please describe Beighton’s hyper mobility testing you used. It appears 6 subjects were hypermobile and 7 were not.

Gait analysis – No significant differences for dynamic valgus knee…… not reported?

Discussion - 1st paragraph – “This indicates that the patients do not….” In your study this is the case. Based on the number of subjects I do not think you can supports a sweeping statement.

Discussion – 2nd paragraph – You are stating rehab focus should be focused on hip abduction strengthening based on your findings and other studies. You did not find a significant difference. Other studies suggest motor control, not muscle strength, as the focus.

Discussion – 3rd paragraph - This paragraph contradicts the previous paragraph that strength is the focus. This suggests pain control should be the focus.

Discussion – 5th paragraph – The study was straight forward – opinion. Reword.

Check references – In particular – capitalization

Table 3 – this appears to stand alone – Minimal discussion in text.

Suggest referring to all subjects as subjects – not patients and subjects

Major Compensatory Revisions

Abstract - Conclusions – confusing. The sentence starting with ..The activation of the gluteus….. what does this mean? Activation is reduced but could not be confirmed?

Background. 2nd paragraph. “If hip instability is present these muscles have to work even harder”. This reference is a pilot study. They did not state this. They found GM muscle activity did not increase with more challenging tasks suggesting a different strategy. How currently stated in the manuscript is misleading.

Methods 1st paragraph - The study is powered to detect a 3.5 difference between groups (hip adduction angle). Please explain why you hypothesize a 3.5 difference is meaningful. It appears the study is underpowered.

Gait analysis results – Table 3? There is no discussion in the methods regarding this kinetic data presented in table 3. Why this included if is there is little discussion regarding this component of your study. Was this from the parallel
Discussion – 4th paragraph – In the Bellabarba study patients presented with a painful snapping in the groin. They tested with traction under fluoroscopy. As presented it would appear to the reader your subjects were the same as subjects in the Bellabarba study. The remainder of the paragraph is speculation. While ligamentous laxity may allow the ITB to snap abnormally, several suggest ITB tightness is a contributing factor to ITB snapping. The Bellabarbara study was 5 cases. Cases are not cause and effect and to state a high prevalence based on 5 cases is misleading.

Level of interest: An article whose findings are important to those with closely related research interests

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'