Reviewer’s report

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

Version: 1 Date: 9 April 2013

Reviewer: Wanda Forczek

Reviewer’s report:

General comments
The manuscript describes an experimental study with the objective of investigating the walking pattern and muscular activity of the hip muscles between patients with symptomatic external snapping hip and compare it with able-bodied controls. Authors concluded that no significant differences in the walking pattern were found between the groups, though they found some trend towards a reduction in the activation of the gluteus medius muscle in the presence of symptomatic external snapping hip.

Some of the data may present interest for BMC Musculoskeletal Disorders readers interested in gait analysis, yet the paper needs some revisions.

Minor Essential Revisions

Methods
Participants
It is worth to put the information about the number of women and men in the text. For the future it would be good to provide (as one of the exclusion criterion) a question about pregnancy. It is known that during this period due to the increased level of relaxin (mainly) there is larger laxity of the joints and ligaments. The information about the participants are included in Table 1. For sure, while reading the text the reader should know where to find them. So the suggestion is to put the reference to Table 1.

References
There are some positions that require corrections (e.g. 8, 21, 23).

Tables
Table 2 and 3: the description sentence should start with the capital letter.

Major Compulsory Revisions

Abstract
Some of the keywords are also present in the title.

Methods
Participants

There is no information about subjects' BMI at all. Was it within the range for normal body weight? There is evidence that BMI affects the gait parameters, so this information has to be included in the Methods section.

In Table 1 there is information about a dominant leg. How it was identified? Bearing in mind that it reflects functional asymmetry it was worth to measure the length of the lower extremities since it prevents from the risk of asymmetry following from different length of lower extremities. That is why there should be included such information.

There are missing information about the measurement protocol. What was the command given to subjects before they initialized each of the trial? Where, on the walkway, was a force platform placed? Did the subjects know where it was? Were the subjects instructed to hit the force platform with the given foot? This kind of approach may be a risk to manipulate the step length and thus affect other parameters.

How many cycles were recorded as a whole in each person?

As to EMG – how the electrodes were placed on the muscles (according to which recommendation)?

The velocity, indeed, is a parameter that can affect the results. How was the constant velocity of the level gait achieved? In my opinion and experience it is very hard to obtain it especially having such a small sample. What was the mean velocity of each individual's gait and its deviation?

Results

Gait analysis

Providing the spatio-temporal gait data in table format would make the reading of the article an easier task.

As to the kinematic data, Table 2 should be supported by the comment on the rationale of the periods when the joint angles were identified (clarify the inclusion criterion). The same refers to the kinetic data (Table 3).

It would be valuable to compare the results between women and men. There are some investigations that revealed sex as a risk factor for snapping hip.

Discussion

There is quite a poor discussion section. This section should be improved by the analysis of the literature in this field.

Discretionary Revisions

As the authors noticed, there are plausible alterations of the pattern of gait when the velocity is changed. It would be interesting to compare the patterns of walking subjects with slower and faster velocity.
For the convenience of the reader it would be better to provide separate section ‘Limitations of the study’.

The writing is acceptable.

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