Reviewer’s report

Title: Improving the sensitivity of the hop index in detecting functional limitations in the anterior cruciate ligament deficient by transforming the one leg hop for distance scores

Version: 1 Date: 22 September 2005

Reviewer: Jon Karlsson

Reviewer’s report:

Comments to the authors.

Title

The title is too long. Please rewrite to a shorter and more distinct title. The word knee is missing; it should read”…. In the ACL deficient knee, by transforming…..”

Abstract

1. In general terms, the Abstract is well written and describes the results adequately.
2. Please do not use abbreviations in the Abstract. Some of the abbreviations are not even explained. Please revise.
3. Please define “hop index” in the Abstract.
4. The authors should make it clear that the sensitivity is low. Even after the arithmetic transformation, the sensitivity was low. The authors do not really emphasise this in the Abstract.
5. The authors only mention the 90% hop index in the Abstract, they should mention the 85% hop index as well.
6. The last sentence should be moved to the Discussion section; it is obvious that the hop tests should be further explored in larger studies, preferably with better study design.
7. The key words are relevant.

Introduction

Even though the introduction is mostly well written, it does not really come to the point, i.e. what is the background. In other words, which is the controversy, and why was it necessary to do this study? This is a central issue and should – in my opinion be directed to the important issue – the functional evaluation of the ACL-deficient knee. Please rewrite.

The description of the OLHD is sufficient and the correlation with the IKDC is good. However, the Introduction is far too long and for instance the second paragraph on page 5 should be deleted, this is common knowledge. Moreover, it is easy to shorten the Introduction further without losing any major scientific information, please rewrite. Also, the second paragraph on page 7 can be deleted.

Why either 85% or 90% hop index should be chosen is not clear at all, please explain and discuss in further detail.

Did the authors have any hypothesis?

Methods

1. The subjects and test procedure are well described, but the hop test is really very simple.
2. Why did the authors use the longest hop and not an average of the three tests? How familiarization and warm-up was done is not described.
3. I question the statistical methods, with such a limited sample. Was any sample size calculation done?
4. Calculation of sensitivity and specificity are not appropriate in this context, and should be deleted.

Results

1. Patients were tested between 5 and 60 months (6 years) after the ACL injury, in other words a very heterogeneous patient group. It can hardly be expected that the same muscular function can be expected after 5 months and 60 months.
2. Please write 20 cm instead of 0.2 m, and 5 cm instead of 0.05 m.
3. In general terms the Results section is too long, at least half of the Results section can be moved to the Discussion.
4. Sensitivity and specificity are not accounted for. I suggest the authors delete this information.

Discussion

1. Please start the Discussion with a short sentence…. “The most important finding of this study was....”
2. The Discussion section is very brief and does not include any real comparisons with previous studies. For instance, which tests should be used? Obviously the OLHD can not be recommended.
3. I suggest the authors thoroughly discuss the limitations of the study, such as too limited sample and no sample size calculation. Moreover, what was the hypothesis, what did the authors expect to find?
4. Finally, please give a short and relevant conclusion to the present study. What is the clinical relevance? Any future perspectives?

References

The references are up to date and relevant.

Figures and Legends

The references are relevant and may be kept.

Tables

Tables 1-3 should be deleted. The information in these tables is common knowledge.

Table 4 can be kept.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)
What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:
'I declare that I have no competing interests'