Reviewer's report

Title: Knee arthroscopy and exercise versus exercise only for chronic patellofemoral pain syndrome. A randomized controlled trial.

Version: 1 Date: 29 May 2007

Reviewer: Ewa M Roos

Reviewer's report:

General

This paper concerns the effect of knee arthroscopy for chronic patellofemoral pain syndrome, the design is randomized and controlled and the trial is unique and much needed not only within orthopaedics but also within primary care and sports medicine, and for this group of patients where evidence-based treatment is not available. The results indicate arthroscopy having no beneficial effect in addition to exercise which was effective in improving self-reported outcomes in both groups. My major comments relate to how the trial was reported and how the methods were described. An overall major comment is that I suggest the authors read the CONSORT statement and make sure they report their trial in conformity with this set standard for randomized controlled trials. This is important for the quality score of the trial and also for inclusion in future meta-analyses.

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

P4,P1,L3 and Figure 1. The text is ambiguous. The inclusion/exclusion of patients has to be reported in an unambiguous way. Example: “All patients (64?) answered a structured questionnaire. Orthopaedic surgeon excluded 3 patients. All the patients who fulfilled the final inclusion criteria (61?) signed… In Figure 1, 61 met inclusion criteria as set by orthopaedic surgeon (in conformity with text), but then 5 subjects are excluded thereafter. By whom and for what specific reasons?

P4,P3. Please give the exercise program as additional material to be downloaded from the journals webpage.

P5, P3. Please give the Kujala score. From the text it cannot be determined what items are included in this score and thus it is not known what is measured, pain, function, or what? Please also describe in detail how the score was administered since it is known from other knee scores that administration by a surgeon or an unbiased observer is associated with observer bias in relation to patient-administration. If the administration methods were different at the different time points, please be specific in your information.

P7, P2, L1. You state the analysis to be intention-to-treat. I would then suggest that an additional analysis of 28+28 patients with baseline results carried forward for patients not available for follow up (worst case scenario) is performed.

P9, P2, L10. This statement has to be modified. Quite a lot is known regarding the placebo effect of surgical interventions. I suggest you review the literature, including the arthroscopy trial by Moseley et al. NEJM 2002 and the glucosamine trial by Clegg et al. NEJM 2005, improve your discussion and give appropriate references.

P3, P2, L10. I suggest you expand the two lines discussing the effect of exercise in your trial. Actually, an alternative interpretation of your results is that exercise was effective both with and without the addition of arthroscopy. This has implications for clinical care and should be appropriately discussed.

P10, P3, L7. Unless you can give appropriate references to support your statement that future studies should focus on subgroups determined by MRI or clinical examination, this statement should be deleted. To my knowledge, all available studies show poor correlation between measures at body structure level (x-rays, MRI etc) and activity and participation levels (patient-relevant aspects such as pain and function). If anything, you should focus on subgroups with less/more pain, less/more functional limitations when you outcome is pain and function (which I guess, but not know, that the Kujala score evaluates).
Figure 1. Please read the CONSORT statement carefully when designing figure 1. I guess that patients not receiving allocated treatment were really drop-outs not available for follow-up. One may interpret the current figure as the patients not receiving allocated treatment but were available for follow-up. The information given that 3/1 patients underwent arthroscopy from 2-9/9-24 months AND were included in ITT analyses is unclear. What does this really imply?

Table 1. The first stage, I guess is prior to the 61 given in figure 1. But in the text you state 3 were excluded by orthopaedic surgeon, what stage was this, 1 or 2? In figure 1, 5 patients are excluded after seeing orthopaedic surgeon, what stage was this?

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

P5, P2, L8. Please clarify regarding meniscus resections. You state that 3 patients were excluded due to meniscal symptoms prior to randomization. Here you state that meniscus resections were performed, indicating that meniscus resections were performed in subjects not having meniscus symptoms. Is this correctly understood, and if so how was this justified?

P5, P2, L13. Please state how the time from arthroscopy to exercise was adjusted.

P6, P2, L4. The two anchors of the global rating scale indicate cross-sectional evaluation (asymptomatic knee) and longitudinal evaluation/change (marked worsening). Both anchors should reflect change. Have the anchors been correctly translated from the original language?

P7, P3, L6. Please clarify, 9 month follow-up?

P9,P1,L1. Since the content of the Kujala score is not given, it is not possible to interpret “overall additional advantage”. Please clarify.

Table 3. Exchange “Before treatment” with “baseline”. Exchange “9-months after the randomization” with “9 month follow-up”.

Table 3. VAS during sitting up. What is sitting up? Does it reflect change (sitting up to/from laying down) or do you mean during sitting (without change)?

Table 4. Please help the reader by inserting “Kujala score” in a separate row over the last 4 columns instead of repeating “Kujala score” three times.

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Discretionary Revisions (which the author can choose to ignore)

P4, P3 I suggest you change header from conservative treatment to exercise protocol or equivalent.

P6, P2, L2. Omit the word “symptoms”.

P7, P3, L3. Please do not give percentage for single patients (1/28, 3/28), give absolute numbers only.

P7, P4, L3. Please do not give mean scores of 3 patients. If anything give absolute score improvements or median improvement.

P8, P4. You state that at the 24 mo follow-up there was still no difference between groups. Was the improvement seen earlier maintained or not?

P10, P2, L3. Please omit the word “conservative”.

Table 2. Tab inserted by mistake: …Duration TAB of symptoms…
**Which journal?**: Appropriate or potentially appropriate for BMC Medicine: an article of outstanding merit and interest in its field

**What next?**: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Quality of written English**: Needs some language corrections before being published

**Statistical review**: No

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