Reviewer's report

Title: Arthroscopic Partial Meniscectomy in Middle-Aged Patients with Mild or No Knee Osteoarthritis: A Double-Blind, Randomized Sham-Controlled Multi-Centre Trial

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Reviewer: Gunter Spahn

Reviewer's report:

The authors are planning a prospective and randomized study about the effectiveness of meniscectomy in patients who are suffering from knee pain and mild osteoarthritis.

General it is a very interesting concept because more Level I studies urgently are needed to assess the impact of arthroscopic measures. For my personal opinion it is a little curious to publish a study protocol only without any results. Still I give my comments.

Title:
The title must more clearly enunciate that it is a study concept only. It suggest: Arthroscopic partial meniscectomy in middle-aged patients with mild or no knee osteoarthritis: Pre-study concept for a double-blind, randomized sham-controlled multi-centre study.

Abstract:
Background: The first sentence isn’t correct. Many studies did demonstrate the positive effect of partial meniscectomy in symptomatic (!) patients. It should be enough to say “The optimal treatment of a degenerative meniscus tear in patients with mild OA is unknown”.

Background:
In this chapter the authors are very one-sided. You haven’t done your study! In this section it is urgently needed to discuss the difference between symptomatic meniscus-tears (positive clinical tests) and the casually tear (e.g. MRI finding)!


Methods:
The main default of your concept is the patient selection! This must be revised before this study concept is acceptable.

1. How many patients you will include in the study. This must be calculated before you perform a randomized study. Did you perform a pre-study power
analysis to calculate the number of patients? This is urgently needed from the ethical point of view to reduce the number of needless sham-operations.

2. How do you recruit your patients? It is very important to describe the time-point of inclusion. I’m sure high-class sportsmen or patients with heavy work will decline the participation into the study. But these patients have to be listed also! Mosely performed his study in highly selected patients collective! This is the main bias of this study! He only included US-army veterans with a very high demand for financial benefits. Similar effects we know from our German patients in the “occupational insurance”! You have to register all potential candidates for this study before inclusion! This must clearly describe in the study protocol.

3. The preoperative evaluation isn’t sufficient for an arthroscopic meniscetomy! The prevalence of meniscus tears/damage in MRI is very high. Only few patients really are suffering from “symptomatic” meniscus tears. This only can made by are careful clinical diagnostic. Before you perform a meniscectomy the patients should present positive clinical meniscus-signs (e.g. Steinmann, McMurray…). This must documented preoperatively as well as in your follow-ups.

4. The KL-score alone has a high “interobserver variance”. I suggest to perform standardized 30°-flexion standing radiographs. Thus you are able to evaluate objective parameters for the “diagnosis OA”. The joint space narrowing, the varus or valgus angle, the extension of osteophytes has to describe.

5. The interventions also need some complements. When do you perform “meniscus surgery”? How do you deals with marginal fringes for example? What do you do in case of cartilage lesions? Do you remove loose bodies in both groups? Please clarify!

6. How many surgeons are involved? Are there well-experienced surgeons only?

7. Have you criteria for abortion? For my personal meaning it isn’t ethical to let well alone a “buckle-handle tear” in a young patient! How do you handle patients with insufferable knee pain at 3month control?

8. The postoperative evaluations must include indications about recovery to occupation and sports (job-title, sports-kinds, time-interval etc.).

Discussion:
You discuss a little prejudiced, sorry.

References:

Table and figures:
No comments.

Level of interest: An article of importance in its field
Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

no conflicts