Reviewer’s report

Title: Comorbidity and disability in patients with osteoarthritis of the hip or knee

Version: 1 Date: 5 December 2007

Reviewer: Felix Angst

Reviewer’s report:

Positive criticism

This paper deals with the important topic of comorbidity in the assessment of health and quality of life in hip and knee osteoarthritis (OA). Compared to previous literature, the assessment of the severity and not only of the number of the comorbidities is new and important (I would stress this in the paper somewhat more). The text is short (exception: the Discussion), clearly and well written and easy to understand, especially the aim of the study and the reporting of the methods and data, especially the stratified analysis of mild (severity 1-4) and moderate (severity 2-4) burden of comorbidity and the reporting of the explained variance by the comorb. score. The discussion contains careful interpretations and a limitation section.

Major compulsory revisions

1. Diagnosis and radiographic staging of OA: It is not clear whether this has been done according to well-known classifications, e.g. the ACR (American College of Rheumatology) criteria for OA diagnosis and the Kellgren radiographic stages. If international, standardized definitions and classifications were not used the authors should argue why not.

2. Of 784 initially considered/asked patients, only 258 were finally included which corresponds to a rate of 67% of patients who were not included. Only 364 (46%) volunteered. This causes problems and limitations of generalizability of the results. Is there further information or assessed data to characterize the excluded patients? For example, were they older, more frequently (female), more severely affected by comorbidities than the examined population? This would improve the data’s ability to generalize the findings.

3. To improve the easiness to read, compare, and interpret the score data (especially for Table 5), I suggest to transform all scores, i.e. the WOMAC scores, from 0=worst health: most pain, no function to 100=best health: full function, no pain as it is originally done for the SF-36.

4. As described in the methods, many parameters were assessed in addition to the main outcomes, e.g. level of education, BMI (a strong predictor for knee OA!), etc. but I am not sure whether they were included into the regression - as I understand, only sex and age were included. Please include all assessed parameters which may confound pain and function and repeat the regression
analysis: education, matral status (partner or not), BMI, smoking, sports, insurance status, use of therapies (physioth., complementary med.) etc. See also the reference in item 6.

5. There is previous literature which examined the influence of comorbity on the WOMAC outcome and which were not taken into account for this study. E.g.: Weigl M et al. Predictors for response to rehabilitation in hip and knee osteoarthritis. Osteoarthritis Cartil 2006;14:641-51. Please review the existing literature more carefully and include those findings into your study.

Minor essential revisions

6. Many of the results were repeated in the discussion. I suggest to shorten the discussion (actually almost 4 pages).

7. The problem with every assessment of comorbidity is the (metric) comparability of two equal scores. For example, a hypertension or a skin disease (which are excluded: see item 9 below!) as neurodermitis or psoriasis which need treatment (level 2, moderate) will not result in the same burden of disease as post myocardial infarct state, depression, or cancer (all with level 2) but the score is 2 for all. Thus, the metric expressiveness/validity of the comorb. score is limited. I would emphasize this issue in the Discussion.

8. To my experience and also to Table 3, other musculoskeletal diseases are the most prevalent comorbidities in hip and knee OA patients, e.g. OA on other joints, inflammatory dis. as rheumatoid arthritis, or soft tissue rheumatism. These were excluded by definition by exclusion of topic 10 ## musculoskeletal and skin (go together: strange, different to ICD-10!) diseases, except osteoporosis which is classified as metabolic disease (also strange, in ICD-10: musculoskel. dis.). Are there more data about concomitant musculoskeletal diseases?

9. In this context, some additional information about the validity, importance, and test results of the CIRS may be interesting to report (e.g. in Methods).

Discretionary revisions

none

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

Level of interest: An article of importance in its field

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