Reviewer's report

Title: A prospective study of the impact of musculoskeletal pain and radiographic osteoarthritis on health related quality of life in community dwelling older people

Version: 2 Date: 24 February 2012

Reviewer: Pekka Mäntyselkä

Reviewer's report:

This study aims to describe the association between osteoarthritis (OA) and quality of life (QoL) in a community dwelling population-based sample of older people with a five-year follow-up. Pain symptoms were. Diagnosed osteoarthritis was defined as self-reported OA at neck, back, hands, shoulders, hips, knees or feet. As well pain symptoms at these locations were asked. X-rays of hips and knees were taken at baseline radiological findings were scored. Assessment of Quality of Life (AQoL) questionnaire was used as a measurement of QoL. The data consist of 1098 men and women aged 50-80 years. Follow-up data for QoL were collected on average 2.6 years and 5 years later. The main findings were that pain is common and stable over time; pain is the strongest musculoskeletal correlate of QoL and mediates the association between diagnosed OA and QoL.

Major Compulsory revisions

At the first sight, the design and method seem to be valid in order to answer the study question. However, I feel confused with this study. There are different concepts and definitions. Self-reported physician diagnoses of different OA, radiological scoring of knee and hip OA and pain in joints (or back) with possible OA. Therefore I have several questions:

-The authors say that they did not seek to confirm doctor-diagnosed cases of osteoarthritis. Would this have been possible?

-Was there a discrepancy between self-reported and radiological OA of knee or hip? How many of those who reported having OA had also radiological OA and vice versa?

-Participants who did not have an MRI at phase 1 were excluded. What was MRI for? It is written that TasOAC aimed to measure progression of OA. Why this data were not used in this study?

-The authors state that pain is common over time. Did they measure pain at follow-up? In methods it is written that participants completed questionnaires about pain in baseline. In Table 4 (footnote) is written that “radiographs not included as they were only collected at phase 1”. But did participants report about pain and OA also at follow-up?

- WOMAC or other OA-specific questionnaires were not used in assessment of pain and function. Why?
The authors state that pain and radiographic changes are common in persons with osteoarthritis, but their relative contributions to quality of life are unknown. Radiographic changes are certainly common in OA because criteria of OA include radiological changes. As well pain is usually the first symptom of OA. In a study focusing on OA diagnosis based on self-report is questionable. Therefore I find it difficult to see what we are talking about. Are we talking about OA or something which is taught to be OA, or pain related to OA or pain regardless of OA. Therefore I find the base of this setting does not lie ion the solid ground. Still, the conclusion of this study may be right although not surprising. For example a study from Japan has shown that subjects with symptomatic OA had significantly lower physical QoL than subjects without it (Muraki et al. 2010) Another study with a follow up suggested that “age, knee osteoarthritis, knee pain, comorbidity, and increasing chair stand time were independently related to the subsequent health-related quality of life” (Norimatsu et al 2011).

I conclude that - at the first sight - this study is well conducted and the findings are plausible although not very novel in general. Pain is related to worsening QoL more than radiological changes of OA, and multisite pain is even more strongly related to low QoL. However, after reading this paper properly, I found myself in a state of confusion. Self-reported OA could be assessed against radiological changes. QoL could be assessed in relation to more precisely defined OA and pain in general.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests