Reviewer's report

**Title:** Relationship between foot function and medial knee joint loading in people with medial compartment knee osteoarthritis

**Version:** 1  **Date:** 7 May 2013

**Reviewer:** Ru-Lan Hsieh

**Reviewer's report:**

Major Compulsory Revisions

This study examined the relationship between foot function and medial knee joint loading in people with medial compartment knee OA. I have some comments as listed below:

1. The case number was too small.
2. Lack of power and sample size calculation.
3. In the introduction, the authors claimed that compared to controls, people with medial compartment knee OA have a relatively pronated foot. They also claimed that footwear and orthotic interventions aim to reduce the knee adduction movement is by pronating the foot through lateral inclination of the insole. In the present study, the results showed increased foot pronation is associated with reduced medial knee joint loading. Therefore, the authors claimed that medial knee joint loading is reduced in people with OA who walk with greater foot pronation. However, there was lack of the foot position of the participants in the present study. Do they belong to normal foot position, pronated or supinated foot position? Different foot position would affect the medial knee joint loading differently. Therefore, the authors should give us their static foot posture firstly, and then re-analyze the data by sub-classifying them according to normal foot, pronated foot, and supinated foot, such as using the Foot Posture Index.
4. As the authors discussed in the discussion that “while some studied investigating lateral wedged insoles have reported a reduction in the knee adduction moment, others have reported an increase in knee adduction moment.----These findings support the suggestion that there may be sub-groups that better respond to lateral wedged insoles.”, I think the suggestion also fit to the present study. Therefore, the authors should re-analyze the data by sub-classifying them according to normal foot, pronated foot, and supinated foot, such as using the Foot Posture Index.
5. How the authors explain the condition of patient with knee OA with increased knee adduction moment with already existed pronated feet to walk in more pronation, that is over pronation, to reduce the knee adduction moment?
6. The participants included in the present study only fitted the radiographic criteria. There was lack of clinical severity, such as pain intensity, physical function, etc. These factors would affect the gait performance.
**Level of interest:** An article whose findings are important to those with closely related research interests

**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.