Reviewer's report

Title: Prevalence of hallux abducto valgus in the general population: a systematic review and meta-analysis

Version: 1  Date: 2 July 2010

Reviewer: Uyen-Sa Nguyen

Reviewer's report:

OVERALL COMMENT:

The topic of the current manuscript is important and timely. The literature review based on the Epidemiologic Appraisal Instrument was systematic, rigorous, very thorough, and impressive. However, the pooling of the data using a meta-analysis despite “the lack of a clearly stated definition of HAV in the majority of studies reviewed” is not justifiable. Pooling the overall prevalence among the 24 studies “…that reported HAV prevalence for the overall population…” could be misleading given possible differences in population, time reference, and definition of HAV.

If such large differences occur (in study design, time, populations, and definitions of HAV) across the studies, then the appropriate goal for the study may not be to provide a pooled estimate but to describe systematic variation in study results (1).

SPECIFIC COMMENTS:

- Major Compulsory Revisions

1. The fact that 21 of the 78 papers included in the meta-analysis were based on hand-searching of the reference lists despite an initial 8456 electronic hits, raises some questions regarding the appropriateness of the initial search criteria.

2. It is not enough to determine the frequency of HAV over a denominator; a well-defined population and the period of time in which HAV were counted are both essential:
   a) Including studies conducted over 40-50 years ago or from cultures vastly different in terms of shoe-wearing may not be relevant, and not accounting for cultural differences or adjusting for cohort effect may not be valid.
   b) Age range of 18-65 is too broadly defined.
   c) The relevance of including school children or younger is unclear.

3. The authors implied that studies with high estimates of HAV were probably biased or of low quality. However, the authors have also pointed out that recent studies did show that women or older people had higher prevalence of HAV as compared respectively with men or younger people. In fact, our recent findings from a population-based study of older adults enrolled between 2005 and 2008 in
Boston, Massachusetts, USA, indicate that older women had a HAV prevalence of 58% while older men had a prevalence of 25% (Osteoarthritis & Cartilage 2010:18;41-46). With the aging of the population, one may expect to see even higher sex-specific estimates of HAV prevalence.

- Minor Essential Revisions

4. Need to clearly label and number tables and figures

REFERENCE:

Level of interest: An article of importance in its field

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.