Title: Gait characteristics associated with the foot and ankle in inflammatory arthritis: a systematic review and meta-analysis

Version: 2
Date: 29 January 2015
Reviewer: Tanja Kostuj

Reviewer’s report:

At all there are 2 Minor Essential Revision within my review:

The study focuses on an important topic: gait analysis in patients with special foot disorders become more and more common. Beside osteoarthritis and rheumatoid arthritis there is still a lack of experience – especially with regard to other systemic inflammatory diseases. Due to the inhomogeneity in both the diseases and the sample sizes in different studies, a meta-analysis is helpful to point out which of the gait parameters are affected by the diseases.

Methods are described meticulously seem to be appropriate (a statistician with experience in meta-analysis should be asked additionally!).

The methodology is understandable explained. Additionally median and range of patients and controls should be given in the text to make it easier to the reader (minor essential revision).

The analyzed databases are mentioned and the inclusion and exclusion criteria are given in detail. Further the process of search, data extraction and estimation of quality is explained carefully.

The large number of publications considered as well as the clearly defined inclusion and exclusion criteria make the data sound.

There is no evidence for manipulation in the figures. The forest plots of the different gait parameters regarded underline the large number of parameters taken into account by the authors and illustrate the results to the reader.

Discussion and conclusions are adequately supported by the data – especially when taking the additional files into account, which underline the inhomogeneity of the included studies. The manuscript adheres to the relevant standards.

Limitations concerning sample sizes and inhomogeneity in the activity, duration and different types of inflammatory arthritis regarded in the reviews and the meta-analysis are mentioned, while the distribution of the different types of gait analyses in the individual studies can be taken from the additional files only. Due to their impact of the results from the different studies regarded in the review and the meta-analysis, this should be more pronounced in the manuscript as a limitation as well (minor essential revision).

The abstract conveys what has been found and the writing is good.

The authors clearly acknowledge any work / publication upon which they are
building.

In summary the article deals with an important topic – the objective analysis of gait abnormalities and foot function in the large and inhomogeneous patient’s group with inflammatory arthritis (about 2% of the inhabitants in the Western European countries and the USA). Due to the limited knowledge concerning the parameters affected in these patients as well as the different methods in gait analyses used in the different studies concerning the models and techniques used this meta-analysis is suitable to give the reader a valuable overview.

**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:**

There are no competing interests - shares of pharmaceutical companies or medical device manufacturers can be contained in a fond - but I do not known in detail.