Reviewer's report

Title: Differences in gait characteristics between total hip, knee, and ankle arthroplasty patients: a six-month postoperative comparison

Version: 1 Date: 4 April 2013

Reviewer: Keith Rome

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Abstract
Remove gait ability to gait differences.
In the methods section please mean (SD) age of patients recruited into study
Conclusions: is there gait disability or a reduction in gait characteristics?
The term gait disturbances could be misinterpreted please consider re-wording.

Methods
How did the authors identify psychiatric problems?
Post-operative care: was it undertaken for each individual or as a group session. Please clarify.
The physical therapy was not standardised across all groups. This could be a limitation of the study.
How many patients completed rehabilitation after 6 months for each group? A flow-chart maybe useful.
Unclear on the reasons of a fast walk: perhaps the authors can elaborate.
Could fatigue be an issue with three repetitions at each walking speed? Did the authors allow a time to recover from each walking trial?
To reduce bias did the authors consider randomizing the walking speeds?
Table 2: rather than report F-values perhaps actual values (mean and SD) would be sufficient.
How was mean side-to-side asymmetry assessed?

Discussion
There is perhaps too much postulation relating to the current results, and suggest delete the comments and this would also reduce the discussion section to be more succinct:
Page 13: remove ‘it is likely that patients purposely avoided knee flexion….’
Page 13: remove ‘it is worth mentioning that side-to-side asymmetries….’
Page 14: remove ‘we conjectured that quadriceps weakness…’
Page 13: perhaps too much of a literature review relating to Brodsky et al work.
Please be more succinct.