Reviewer’s report

Title: Gait analysis following single-shot hyaluronic acid supplementation: a pilot randomised double-blinded controlled trial

Version: 0 Date: 15 Feb 2019

Reviewer: Jufen Zhang

Reviewer's report:

The authors investigated changes in four basic gait parameters of walking speed, stride length, cadence and swing duration from baseline to 4 weeks follow-up for each of three different treatment groups: hyaluronic acid (HA)+mannitol (n=9), HA+sorbitol (n=5) and saline placebo (n=8) in 22 patients with knee osteoarthritis. This was a 3-arm, prospective, randomised double-blinded controlled pilot trial. They found that only changes in walking speed and stride length with the HA+mannitol treatment group were statistically significant as tested with the Wilcoxon signed-rank tests. Overall, the paper is well written. I have the following comments.

1. This is a retrospectively registered study. The study started in May 2013 and completed in February 2015. Then the study was retrospectively registered on August 20, 2018. Explanation should be given why the study was registered a few years later after completing the study.

2. It is not clear what the primary outcome was in the study?

3. Randomization: on page 7, the authors indicated that patients were assigned to one of three groups according to the previously developed, computer generated, and randomization key. It may be better to provide the method in more details.

4. It is not clear why authors selected 22 patients in the study. Are there any evidence to support this?

5. It seems that the study did not define clearly about the primary and secondary objectives for the main study and the outcome measures.

Level of interest

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