Reviewer's report

Title: Effect of TENS on pain in relation to central sensitization in patients with osteoarthritis of the knee: protocol of a randomized controlled clinical trial

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Reviewer: Jean-Pierre P Raynauld

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This is a proposal for a RCT study using TENS to treat pain related to knee osteoarthritis. TENS is an analgesic modality known for decades to treat pain. Studies of the TENS' efficacy for patients with knee OA have yielded conflicting results, probably because of patients' heterogeneity regarding baseline pain, x-ray grading, co-analgesic use and central pain sensitization.

This proposal has the great potential to address this important aforementioned research question. Knee OA is a very prevalent condition and TENS is a well-known approach to treat pain. This is an extremely well designed study to be conducted by a group of experienced investigators. The manuscript is well written, the methods are very detailed and the proposed statistics to be used are appropriate. The power calculations are realistic and patient recruitment should not be a problem.

I only have a minor comment about this protocol:

Since the TENS programming and electrode positioning is of paramount importance to provide a successful intervention, it would be important to ask the patient to come back for two or three follow-up visits to assess its ability to precisely replicate, over the 12-week period, the TENS installation.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I have no competing interest.