Reviewer’s report

Title: Characterizing the Transcutaneous Electrical Recruitment of Lower Leg Afferents in Healthy Adults: Implications for Non-Invasive Treatment of Overactive Bladder

Version: 1 Date: 16 Nov 2017

Reviewer: Sanjay Sinha

Reviewer's report:

The authors present an interesting paper on transcutaneous stimulation of nerves in the leg that might be useful for the treatment of OAB.

The strength of this work lies in the methodical progress of the authors toward establishing the technique of transcutaneous nerve stimulation for OAB by studying the responses of normal subjects first. The concept of establishing the intensity of current needed for stimulation of the relevant nerve as a ratio of the maximum tolerable current is elegant and clinically relevant.

However, there are some important issues which need to be resolved:

1. From the methodology it is unclear whether the authors counted recordings from two limbs in one patient as two independent sets of information.

2. What might have been the impact of potentially less stratified skin in the calf compared with that around the ankle and foot where friction with footwear would typically cause a thicker and potentially less sensitive skin? Could this be responsible for the higher Tnerve to Tskin ratio for the Saphenous nerve?

3. The above could be resolved by examining the actual data for the stimulations. However, rather than give us the actual data the authors have merely given us graphical summations of the data. This reviewer could not find the actual data set in the manuscript provided by the editorial office.

4. For this relatively small number of subjects it should be feasible to provide the actual data sets for each patient. This would be more useful for readers and would enable them to verify the arguments made by the authors and confirm their statistical methodologies.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

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I am able to assess the statistics

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