Reviewer’s report

Title: The Effect of Long vs. Short Duration of Electroacupuncture on Analgesia and Sensory Thresholds: A randomized study for acupuncture analgesic mechanisms

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Reviewer: Zhen Zheng

Reviewer’s report:

The authors have addressed the comments adequately. I note that the introduction and discussion sections have been revised and additional information has been provided. I accept the authors’ choice of the methods of statistical analysis and data presentation. The aims, the results and discussion are now coherently presented.

Overall this study has addressed an important and clinically relevant issue. The finding that EA of long stimulation produced a prolonged and expanded area of analgesia on hot pain is significant and requires further exploration. I agree with the authors’ view that the mechanisms of EA with long stimulation are different from EA of short stimulation.

I am however not entirely satisfied with the hypothesis “a shifting of A-delta mediated C-fibre modulation to a more centrally mediated modulatory mechanisms of thermal pain” and “the shifting from peripheral afferent induced inhibitory mechanisms to a centrally mediated modulatory mechanism was supported by the fact that the duration of the analgesic effect outlasted the de qi sensation of the EA stimulation and observed analgesic effect was in bilateral lower extremities” (page 16 para 1). I do not understand the argument here. Acupuncture analgesia is often centrally mediated but induced by peripheral stimulation, such as needling. I assume that the authors tried to say that A-delta mediated inhibition on C-fibre was via the peripheral neural mechanisms so that the analgesia was localized and short-lasting. I am however not aware of such inhibition at the peripheral site. Did the authors refer to the gate control theory, in which activation of myelinated afferents, in particular, A-beta fibres, inhibits the inputs from C-fibres. If so, then this action is not exactly a peripheral phenomenon. I wonder whether the authors meant to say that A-delta mediated inhibition on C-fibres is a spinal phenomenon, whereas with prolonged EA stimulation, other action centres involving supraspinal mechanisms have been recruited. It is important that the authors clarify this. – Compulsory changes

On the same page, the sentence starting with “This postulation was supported by …. is incomplete. – Minor changes

In the addition, please check the initials of the authors of references 7 – 10. – Minor changes