Reviewer's report

Title: Electroacupuncture activates corticotrophin-releasing hormone-containing neurons in the paraventricular nucleus of the hypothalamus to alleviate edema in a rat model of inflammation

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Reviewer: Byung Tae Choi

Reviewer's report:

This study was performed to see whether CRH and ACTH receptors involve in EA-produced anti-edema effects in CFA-injected pain model. The end points were EA activates CRH neuron to increase plasma ACTH levels and suppress edema through CRH and ACTH receptors. Although the presentation of the data is clear, there is one major and some minor concerns.

Major points

The authors observed CRH and ACTH antagonism for inflammatory edema and hyperalgesia in CFA-induced pain model. Authors explains that EA stimulation have no stress effects in pain model. But if EA stimulation started after CFA injection, CFA and EA synergistically induce stress effects. Some possibility for stress effects of EA could not rule out based on experimental procedures (EA stimulation with 10 Hz frequency and 3 mA intensity, twice in a day) and the present results (increase of plasma ACTH, phosphorylation of NR1 receptor in PVN). It should be mentioned that some possibility of EA stress effects in the discussion section.

Minor points

1. Abstract section: Add more clear description for animal model in the conclusion section as â##in CFA-induce pain modelâ## or â##in inflamed rat modelâ##
2. Method 2.5 section: Clearly describe acupuncture needle thickness, the depth of insertion and units of rat plastic chamber.
3. Method 2.7 section, line 4: * â## X
4. Conclusion section: Add â##in CFA-induce pain modelâ## or â##in inflamed rat modelâ##

What next?: Accept after minor essential revisions

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.