Author's response to reviews

Title: Effect of needle puncture and electro-acupuncture on mucociliary clearance in anesthetized quails

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Author's response to reviews: see over
Reviewer's report
Effect of needle puncture and electro-acupuncture on mucociliary clearance Title: in anesthetized quails
Version: 2 Date: 21 October 2005
Reviewer: Edzard Ernst
Reviewer’s report:
General
Generally a well designed and concisely written paper.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Why is this a “pilot” experiment? In this case it should be aimed at testing feasibility which it does not. The discussion lacks a paragraph outlining the limitations of this study

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

None

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Discretionary Revisions (which the author can choose to ignore)
None

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
Declaration of competing interests:
I declare that I have no competing interests.

Authors’ response to the reviewer:

Dear Dr. Edzard Ernst:
As we know that you are one of the most distinguished scientists in the field of Complementary and Alternative Medicine all over the world, we are so glad that our manuscript was reviewed by you.

Thank you very much for your kind questions. Let us try our best to answer them.

1. Why is this a "pilot" experiment? In this case it should be aimed at testing feasibility which it does not.

At first, we would like say that we completely accept your correction. The word “pilot” in this manuscript is not a proper word to describe this experiment. Therefore, we agree to delete this word in our manuscript. Thank you very much for your great help for wording the manuscript and making it accurate.

2. The discussion lacks a paragraph outlining the limitations of this study.

We have added two paragraphs to the discussion to explain the limitation of this study.

The first limitation is that this experiment was done only in acute animal models to observe short-term effects. So, we need to develop chronic animal models to observe long-term effects in our next experiments because there are both acute and chronic obstructive respiratory diseases in clinic.
The second limitation is that the further detail mechanisms of the effects have not been clarified in this study. So, we need to do further experiments at cellular and molecular levels to investigate the detail mechanisms in our next experiments.

The third limitation is that the principle of this experiment is based on the assumption that anatomical locations of acupoints of the animals are similar to those of humans. So, further standard clinical trials need to be carried out to ascertain the effects on patients.

Please see the following two paragraphs added to the discussion.

“In this experiment, a successful animal pathogenic model was developed, but the effects of NP or EA on the model was observed for only one hour. It is an acute model. Since there are both acute and chronic obstructive respiratory diseases, further experiments on a chronic model are needed to observe a long-term effect. In addition, NP or EA was found to facilitate MTV and decrease the contents of fucose and protein in airway. The primary mechanism may be that the facilitation of TMV partly results from the decrease of the mucin secreted from the airway. However, the source of the mucin has not been determined. So, investigation of the effect of NP or EA on mucin secretion from different kind of secretory cells is needed. Furthermore, the pathways for inhibiting the mucin secretion should be clarified in our next experiments.”
“The anatomical locations of acupoints for LU1 and CV22 in our quail model are those corresponding to LU1 and CV22 in human thoracic region. To investigate the effect of these human acupoints in our quail model, we made the assumption that quails are anatomically similar to humans. Thus, we expected that the locations of acupoints in quails are equivalent to those in humans. Most of the research on acupuncture in animals has been conducted based on this assumption, although there is a controversy on whether it is valid to extrapolate the results of acupuncture research from one species to another (23). Anyway, our experimental results in the quail model have partly provided the clinical empirical effects by acupuncture with scientific experimental evidences. Further studies on patients with the above objective parameters in clinical trials are needed. The results from the clinical trials may, in turn, support the assumption of acupoint similarity in different species in this study.”

For more readable or being consistence with current teaching materials, the international code of acupoints is employed in this revision. Especially, CV22, previously denoted as Ren Meridian, is being changed to Conception Vessel. Otherwise it could be misunderstood by readers. The English terms for specific acupoints in this experiments are revised as well.
We really appreciate your tremendous work for this type of research article.

We sincerely hope that you would be satisfied with our answers. Please do not hesitate to contact us if you have any other questions.

Best wishes!

Malcolm & Shusheng