Author's response to reviews

Title: Colonic epithelial ion transport is not affected in patients with diverticulosis

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Author's response to reviews: see over
To the editors,

RE: Manuscript #BMC_4976387501295664_article

First we would like to thank you for your helpful comments and suggestions on our revised manuscript.

We have re-revised the manuscript according to the reviewers comments and suggestions.

Reviewer s Major Comments:

I think that the clarification on page 4 needs to be made more clearly that the biopsies were taken in normal appearing mucosa, not from the diverticuli per se. This needs to be said exactly. In addition, is there evidence that any cellular/molecular abnormalities associated with diverticuli would extend to normal appearing tissue?

We clarify this by changing the first sentence in line 2 paragraph 3, page 4 to:

Five biopsies were obtained from the sigmoid part of the colon (30 cm aborally to the anus on retraction of the endoscope) using a standard biopsy forceps (Boston Scientific, Denmark). The biopsies were taken in macroscopically normal appearing mucosa, not from the diverticuli per se.

Reviewers Minor Comments:

I would still give the reader a fuller explanation of why changes in SCC necessarily lead to changes in G. Does this mean that transepithelial G is necessarily increased when SCC increases? If this is true, state this in the manuscript. Many readers would not make the connection.

We clarify this by adding the following explanation after paragraph 1, page 12:

Parallel changes in SCC and G was observed.
With the (electronic) circuitry in measuring SCC across epithelia, where a generator as the Na-pump is located in the basolateral cell membrane, the luminal cell membrane represents a serial conductance as does the internal conductance of the pump. Contrary, neighbor conductance elements in the basolateral membrane and conductances in paracellular pathways will act as
parallel conductances. Hence, an increase in the luminal conductance will increase the SCC, while a change in parallel conductances will have no effect on measured transmural SCC.

We now expect the manuscript to be ready for publication and we thank reviewers and editors for suggestions improving the quality of the paper.

Kind regards

Philip S. Osbak