Reviewer’s report

Title: Circulating cathelicidin levels correlate with mucosal disease activity in ulcerative colitis, risk of intestinal stricture in Crohn's disease, and clinical prognosis in inflammatory bowel disease

Version: 0  Date: 25 Feb 2017

Reviewer: Doron Yablecovitch

Reviewer’s report:

> The manuscript by Tran et al. investigates serum levels of cathelicidin for suitability as a potential biomarker in patients with IBD. The authors demonstrate that serum levels of cathelicidin, as determined by ELISA, are inversely correlated with clinical indices in patients IBD. They report that high levels of cathelicidin may suggest a better prognosis in IBD patients and that low levels of cathelicidin is a predictor of fibrostenotic disease. The point of the study is very interesting because of the increasing attention on non-invasive biomarkers that could confirm the diagnosis of IBD or help to monitoring disease activity and severity. A major strength of this study is its novelty, particularly given the paucity data regarding circulating cathelicidin in IBD.

The results are therefore of potential interest to the readers of BMC Gastroenterology

However, the manuscript could benefit from some revisions, as outlined below:

- Introduction - More details are needed regarding to the structure and the expression of cathelicidin. Please add a brief paragraph about cathelicidin molecular structure and cellular source. It would be helpful to mention recent studies considering vitamin D and cathelicidin expression

- Material and Methods- lines 24-37: The paragraph fits better in the introduction.

- Line 44 - Please change "Cohort 1 and 2" to "Patients and samples"

- Line 59 - Power analysis should be integrated to the statistical analysis section.

Results - Line 22 (P.8) please provide the standard deviation or the SEM of cathelicidin levels in UC, CD patients and healthy controls

Line 31 (P.8) - Please provide the correlation coefficient regarding cathelicidin levels and UC clinical activity.

Lines 5-31 (P.9) Please replace "prognosis" to "future clinical activity".
Lines 39-41 (P.9) The addition of p values between the different mayo endoscopic score subgroups is recommended.

Line 12 (P.10) Please replace 'clinical prognosis" to "future clinical activity"

Line 14 (P.10) Please provide the correlation coefficient

Discussion - Line 22 -" The cellular source of cathelicidin in IBD is not known" this is incorrect and should be rephrased

Addition of a comment regarding the role of cathelicidin in fibrogenesis in inflammatory bowel disease is recommended.

The study by Schauber should be discussed as it describes no statistical difference in cathelicidin expression in Crohn's disease compare to healthy controls

It would be appropriate to discuss potential advantages of this biomarker (if any), in comparison with other conventional inflammatory markers.

Lines 12-22 (P.14) The paragraph does not fit the discussion section.

Line 47 (P.14) "It can also serve as an independent…" I recommend toning down that conclusion.

Please discuss the potential advantage of cathelicidin as a novel therapeutic strategy in IBD.

- Table 1 please considers a more clear presentation of the data. Definition of the abbreviation is needed.

General

- Please recheck the reference numbering because there seems to be some inaccuracies.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**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.
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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I am able to assess the statistics

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