

Dear Science Editor Jing Yu and reviewers,

Thank you for recognizing the novelty and potential significance of our manuscript "*Fecal microbiota in pouchitis and ulcerative colitis*" and offering detailed instructions for further revision. We have revised the manuscript according to reviewers' comments. Here are our responses.

Responses for the comments of the reviewer 02445675

Reviewer's comment:

"In this interesting article, the authors provide a detailed description of the current knowledge regarding the composition of the fecal microbiota in patient affected da UC, pouchitis and healthy controls and the role of reduced diversity of Gut microbioma in the pathogenesis of pouchitis itself. It is worthy to underscore that, even if the data coming out from this basic study won't be immediately useful for treating patient affected by pouchitis, the deep insight and detailed description made by the authors of the diversity of microbioma in healty people and patients will provide new clues to better understand the pathogenesis of pouchitis following IPAA for UC. I consider this paper suitable for publication on."

Response:

Thank you for your positive comments and affirming the efforts we have made. We feel grateful for you appreciation on our manuscript.

Responses for the comments of the reviewer 03646676

Reviewer's comment:

“In the present manuscript Li et al. analyzed the difference in fecal microbiota in patients with pouchitis vs. healthy controls and vs. ulcerative colitis patients who did not undergo surgery. The manuscript definitely deals with a hot topic in the IBD and intestinal inflammation field, where data are often conflicting. Indeed, it is interesting and confirms previous reports in the field.”

Response:

Thank you for considering our manuscript valuable. We will keep making efforts in this field in the future.

Reviewer's comment:

“I have problems with the text within the figures overall, which is not fully readable in many panels.”

Response:

I'm sorry for not explaining the figures clearly. Your confusion is important for us to improve the quality of our manuscript. Aiming at your advice, we revised the figure legends to make them more comprehensive. Hope the texts are useful for reading figures now. The updated texts are presented below.

“Figure 1 DGGE profiles of fecal samples from healthy controls. A: DGGE profiles; **B:** marked DGGE profiles. DGGE bands showed relative stability among different individuals.

Figure 2 DGGE profiles showed microbial biodiversity in different UC groups. A: UC patients in remission; **B:** UC patients in mildly active stage; **C:** UC patients in moderately active stage; **D:** UC patients in severely active stage.

Figure 3 Number of bands in DGGE profiles of samples obtained from 41 UC patients. The number of bands was reduced significantly from healthy controls to severe UC.

Figure 4 UPGMA tree analysis of healthy people and UC patients in

different stages. 1~16: healthy people; 17~26: UC patients in remission; 27~37: UC patients in mildly active stage, 38~47: UC patients in moderately active stage; 48~57: UC patients in severely active stage. UPGMA tree analysis showed a significant difference between groups of healthy people and UC patients in different stages.

Figure 5 PCA of DGGE microbial profiles in fecal samples of healthy people and UC patients in different stages. Clustering of similar microbial profiles showed systematic differences among different groups.

Figure 6 DGGE profiles of fecal samples from patients with pouchitis. A: DGGE profiles; B: marked DGGE profiles. DGGE bands revealed relative stability of microbiota in pouchitis group changing.

Figure 7 Number of bands in DGGE profiles of samples obtained from patients performed surgery. The number of bands was reduced significantly in pouchitis compared with control group and no pouchitis group.

Figure 8 UPGMA tree analysis of healthy people and postoperative patients. 1~16: healthy people; 17~27: patients without pouchitis; 28~35: patients with pouchitis. UPGMA tree analysis showed a significant difference among three groups.

Figure 9 PCA of DGGE microbial profiles in fecal samples of healthy people and patients with pouch. Clustering of similar microbial profiles showed significant differences among three groups.

Figure 10 Number of bands in DGGE profiles of samples obtained from all subjects. The number of bands was reduced significantly in pouch group compared with control group and UC group."

Responses for the comments marked in the manuscript:

Language certificate: the whole manuscript has already undergone a comprehensive English revision process by an editing company MedSci. The certificate is attached.

According documents of statements for institutional review board, informed consent, conflict-of-interest, data sharing and biostatistics are attached.

Audio core tip was recorded and attached.

Necessary contents have been added in the updated manuscript as required.

PubMed citation numbers and DOI citation have been added in the updated manuscript as required.

Separate files of each Figure are attached.

All of the revisions we made have been highlighted in yellow in the updated version.

Thank you for your consideration of our manuscript. I sincerely hope our revised manuscript reach the standard of publication in World Journal of Gastroenterology.

Best regards,

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