

ESPS Peer-review Report

Name of Journal: World Journal of Gastroenterology

ESPS Manuscript NO: 9980

Title: Beneficial effect of an omega-6 PUFA-rich diet against NSAID-induced mucosal damage in the murine small intestine

Reviewer code: 00832047

Science editor: Su-Xin Gou

Date sent for review: 2014-03-07 14:04

Date reviewed: 2014-03-11 19:39

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input checked="" type="checkbox"/> Grade C (Good)	<input checked="" type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> No records	<input checked="" type="checkbox"/> Major revision

COMMENTS TO AUTHORS

The manuscript by Ueda T et al. reports on the effect of different dietary fats on the mucosal damage induced by non-steroidal anti-inflammatory drugs (NSAIDs) in mice. Comparing four different diets containing either standard chow or fat rich in saturated fatty acids (SFAs), omega-3- or omega-6 polyunsaturated fatty acids (PUFAs), respectively, they observed that indomethacin-induced damage was exacerbated more by SFA or omega-3 PUFA than by omega-6 diets. In addition, migration of monocytes and platelets to the small intestine was decreased by the omega-6 PUFA diet. The authors conclude that the latter acts by blocking monocyte migration. Evaluation A possible relationship between the fatty acid composition of the diet and the degree of intestinal injury caused by NSAIDs is potentially interesting; in particular the reported differences between omega-3 and omega-6 classes of PUFAs. However, the conclusions of the study need to be strengthened as outlined below: Line 216: The authors state to have shown that the different fat diets alone (without NSAIDs) caused no small intestinal injury. However, no histological data show this to be the case, as Figure 1 only shows the combined effects of diet fats and indomethacin. Histological images documenting the claim by the authors should be included in the study. Table 2: I am puzzled that all diet groups without IND scored a straight 0 mm² (even without a SEM) with regards to lesions. Were these groups analyzed the same way as those with IND? Figure 1: I am puzzled by the big difference in the histology images between the diet groups (C-E), showing either near-complete absence of villi (C, D) or near-intact villus architecture (E). If these images are representative they are hard to reconcile with the modest difference in score shown in the diagram (A) of the same figure. The authors must explain this



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discrepancy. Figures 2-4: The y-axis of the graphs lacks labeling.

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Name of Journal: World Journal of Gastroenterology

ESPS Manuscript NO: 9980

Title: Beneficial effect of an omega-6 PUFA-rich diet against NSAID-induced mucosal damage in the murine small intestine

Reviewer code: 00504457

Science editor: Su-Xin Gou

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CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input checked="" type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input checked="" type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> No records	<input checked="" type="checkbox"/> Major revision

COMMENTS TO AUTHORS

The manuscript entitled "Beneficial effect of an omega-6 PUFA-rich diet against NSAID-induced mucosal damage in the murine small intestine" has compared the effect of omega-6 with other fat-rich diet in the side effect of NSAID. The data are interesting and the directions of the study and manuscript were well organized. However, several concerns below should be addressed before publication

1. The materials and methods did not fully explained how the experiments were done and not clearly matched with the results.
2. Page 7; space error on the top of page 3. Page 7, line 99; apace?
4. In the results, expression of adhesion-related genes such as MAdCAM-1 was not shown but method for qRT-PCR was described in the materials and methods.
5. The method for "Isolation of monocytes and platelets and labeling with CFSE" was not clearly proposed in the results
6. The methods for "preparation for intravital observation" and "analysis of monocyte and platelet dynamics" were hard to match with the associated results. Match the title of methods and results.
7. Results: the description for the results was not clearly addressed with their Figs or tables. For example, line 154-155, "However, treatment with SO did not aggravate the small intestinal lesions": aggravate what? Ulcer or thickness?
8. Fig legends also not clearly represent their study. "Fig. 1. Histological evaluation" can be replace with "Histological evaluation of impact of IND and fat-rich diets"
9. Fig 1; What is histological grade on the y-axis?. Thickness of epithelium?
10. Label Y-axis of the graphs in fig 2, 3, and 4
11. Fig 2 and 3: it is not clear where monocytes adhere in the picture.