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PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology
Manuscript NO: 37663
Title: The maturity of ALPPS-derived liver regeneration in a rat model
Reviewer's code: 03536448
Reviewer's country: Austria
Science editor: Ze-Mao Gong
Date sent for review: 2017-12-29
Date reviewed: 2018-01-07
Review time: 9 Days

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
[ ] Grade A: Excellent	[ ] Grade A: Priority publishing	Google Search:	[ ] Accept
[ ] Grade B: Very good	[Y] Grade B: Minor language polishing	[ ] The same title	[ ] High priority for publication
[Y] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] Duplicate publication	[ ] Rejection
[ ] Grade D: Fair	[ ] Grade D: Rejected	[ ] Plagiarism	[ ] Minor revision
[ ] Grade E: Poor		[Y] No	[Y] Major revision
		BPG Search:	
		[ ] The same title	
		[ ] Duplicate publication	
		[ ] Plagiarism	
		[Y] No	

COMMENTS TO AUTHORS

Within the present manuscript Tong et al. address a highly relevant issue in the field of liver regeneration. Indeed, the question whether the accelerated proliferation observed during ALPPS correlates with the growth of functionally mature liver cells is a hot topic at the moment. While the study design is well-planed and without obvious shortcomings, the results and most of all their interpretation are doubtable in my view. Further, the figures are of a miserable quality and partially not readable, which makes a clear evaluation nearly impossible. Thus, major revision is needed and the authors should focus on the matters pointed out in the added file. Taken together, the present study indeed refers to a highly interesting topic. Indeed, I believe the underlying hypothesis on immature hepatocytes after ALPPS procedure in comparison to simple liver resection. However, the reported data is not well structured and not reported in an adequate way, which renders conclusions far-fetched and highly subjective. The authors

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need to work out the central differences between the ALPPS and the PHx group within this bulk of data. Thus, major revision is needed to guarantee an adequate scientific level.

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PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology
Manuscript NO: 37663
Title: The maturity of ALPPS-derived liver regeneration in a rat model
Reviewer's code: 02550493
Reviewer's country: Spain
Science editor: Ze-Mao Gong
Date sent for review: 2017-12-29
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Review time: 18 Days

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
[ ] Grade A: Excellent	[ ] Grade A: Priority publishing	Google Search:	[ ] Accept
[Y] Grade B: Very good	[Y] Grade B: Minor language polishing	[ ] The same title	[ ] High priority for publication
[ ] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] Duplicate publication	[ ] Rejection
[ ] Grade D: Fair	[ ] Grade D: Rejected	[ ] Plagiarism	[Y] Minor revision
[ ] Grade E: Poor		[Y] No	[ ] Major revision
		BPG Search:	
		[ ] The same title	
		[ ] Duplicate publication	
		[ ] Plagiarism	
		[Y] No	

COMMENTS TO AUTHORS

The authors treat to establish a rat model for evaluating the maturity of liver regeneration derived from associating liver partition and portal vein ligation for staged hepatectomy (ALPPS). The study revealed the immaturity of ALPPS-derived proliferation in early regenerative response, which indicated volumetric assessment overestimated the functional proliferation. ALPPS group: ligation of the portal vein belonging to left lateral, right, caudate lobes, and transection of parenchyma of middle lobe. PHx group: removal of left lateral, right and caudate lobes. Sham group: Open and close the abdominal cavity. In our study, the rats were therefore sacrificed at second and fifth day after operation. Comments: 1. The authors have not used the 70% standard of hepatectomy (in fact, they do not reflect what percentage of liver they remove at the end, which they should do to give it some scientific rigor.) In 5 rats they only remove the LLL which logically induces less regeneration, since only 35% of the total hepatic volume is

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removed, and in the remaining 5 rats, 80% die. 2. The ALPPS technique in rats should simulate the surgical technique that is performed in humans, so they should also ligate the portal branch of the left middle lobe of the rat. 3. The results section should be organized better, since phrases that could correspond to Material and Methods are presented, and others that should be included in the Discussion section. 4. Stage 2 of the ALPPS technique is normally performed 9 days after Stage 1 in humans, and some authors advise extending this period of time by a few more days. However, the authors sacrifice the rats at the 2nd and 5th postoperative day, when the hepatoblasts have not yet matured to hepatocytes. It would be advisable to make a group of rats that is sacrificed between 9-10 days.