

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastrointestinal Surgery*

Manuscript NO: 81695

Title: Computed tomography perfusion in differentiating portal hypertension: A correlation study with hepatic venous pressure gradient

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 06140422

Position: Peer Reviewer

Academic degree: FRCA, PhD

Professional title: Assistant Professor

Reviewer's Country/Territory: Netherlands

Author's Country/Territory: China

Manuscript submission date: 2022-12-20

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-12-25 01:03

Reviewer performed review: 2023-01-07 14:13

Review time: 13 Days and 13 Hours

Scientific quality	☐ Grade A: Excellent ☐ Grade B: Very good ☒ Grade C: Good ☐ Grade D: Fair ☐ Grade E: Do not publish
Novelty of this manuscript	☐ Grade A: Excellent ☒ Grade B: Good ☐ Grade C: Fair ☐ Grade D: No novelty
Creativity or innovation of this manuscript	☐ Grade A: Excellent ☒ Grade B: Good ☐ Grade C: Fair ☐ Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	☐ Grade A: Excellent ☒ Grade B: Good ☐ Grade C: Fair ☐ Grade D: No scientific significance
Language quality	☐ Grade A: Priority publishing ☒ Grade B: Minor language polishing ☐ Grade C: A great deal of language polishing ☐ Grade D: Rejection
Conclusion	☐ Accept (High priority) ☐ Accept (General priority) ☒ Minor revision ☐ Major revision ☐ Rejection
Re-review	☒ Yes ☐ No
Peer-reviewer statements	Peer-Review: ☒ Anonymous ☐ Onymous
	Conflicts-of-Interest: ☐ Yes ☒ No

SPECIFIC COMMENTS TO AUTHORS

1 Title. The title is Appropriate 2 Abstract. Appropriate 3 Key words. The keywords should be different from the title 4 Background. Appropriate 5 Methods. Statistical analysis should contain more detail. Quantitative indices before and after TIPS, including LBV, HAF, LBF, SBV, were compared, and the correlations with HVPG and Child-Pugh stage were analyzed with which tests? 6 Results. The authors used some additional explanations while reporting the results. These kinds of sentences belong to the discussion. Please revise. 7 Discussion. – Clinical implication of these results must be speculated and discusses. – “HVPG is the gold standard for the diagnosis of PH.[1, 4] PH can be divided into two groups depending on the HVPG value (greater than or equal to 10 mmHg), namely CSPH and NCSPH groups. Studies have shown that the proportion of various complications in the CSPH group is significantly higher than that in the NCSPH group.[28] The results of this study showed that the proportion of hepatic arterial blood supply in the CSPH group was significantly higher than that in the NCSPH group before operation, but there was no significant difference in LBF and LBV, suggesting that the changes of blood flow in the liver parenchyma are not determined by



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HVPG only, but also affected by other factors when PH occurs, such as venous to venous collaterals in the liver parenchyma, arterio-portal fistula, and even the pathological degree of liver fibrosis. Therefore, HVPG is only a diagnostic index of PH, which cannot reflect the composition ratio and perfusion volume of effective blood flow in the liver parenchyma, nor can be used to evaluate the blood flow changes after TIPS. “ This paragraph contradicts with the following paragraph. They should be reorganized and combined. The stability of the correlation of the parameters after TIPS surgery must be discussed. Should we understand that TIPS does not create any difference in the hemodynamics of the liver?? How the authors explain this result? - Conclusion part should contain some speculations about clinical impacts. 8 Illustrations and tables. Some CT images of the patients, especially the complicated ones with perfusion measurements and color coded maps must be added. 9 Biostatistics. Please see methods section. 10 Units. Appropriate 11 References. Appropriate 12 Quality of manuscript organization and presentation. Average, please see above. 13 Research methods and reporting. Appropriate 14 Ethics statements. Appropriate

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Position: Peer Reviewer

Academic degree: MSc, PhD

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Peer-reviewer statements	Peer-Review: ☒ Anonymous ☐ Onymous
	Conflicts-of-Interest: ☐ Yes ☒ No

SPECIFIC COMMENTS TO AUTHORS

This manuscript is readable and interesting. The authors explored the feasibility of CT perfusion imaging in quantitatively evaluating hepatic venous pressure gradient, and the blood supply changes in liver and spleen for PH patients, and make correlation analysis between perfusion CT parameters and hepatic venous pressure gradient. The study is well performed and the results are interesting. A minor editing is required.