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PEER-REVIEW REPORT

Name of journal: *World Journal of Clinical Cases*

Manuscript NO: 73016

Title: Influence of the water jet system *vs* cavitron ultrasonic surgical aspirator for liver resection on the remnant liver

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03738365
Position: Peer Reviewer
Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: Japan

Manuscript submission date: 2021-11-08

Reviewer chosen by: Jia-Qi Zhu (Online Science Editor)

Reviewer accepted review: 2022-03-06 02:34

Reviewer performed review: 2022-03-06 12:25

Review time: 9 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [ ] Grade C: Good [Y] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[Y] 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 [Y] Rejection
Re-review	[ ] Yes [Y] No

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Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

1. The authors included patients who had CE-CT scan with portal phase study on postoperative day 7 (±2 days). The intrahepatic blood flow was in dynamic changes within a few weeks after the operation and was very unstable, even there were huge differences every day. When studying CT-enhanced images within 5-9 days after the operation, there is a huge intra-system bias, and it is difficult to ensure the consistency of the collected data. 2. For the patients inclusion, parenchymal dissection of the liver was performed using CUSA before November 2019. Then, the water jet is used as the primary technique for liver dissection. The two groups of patients underwent operation in different periods. In different periods, surgical techniques, anesthesia techniques, and imaging evaluation techniques may have changed over time, thus, affecting the patient's rehabilitation process and imaging evaluation results. The comparability of the findings is called into question. 3. The rate of laparotomy in the WJ group was significantly higher, which was contrary to the current popularization of laparoscopic hepatectomy technology. Compared with laparoscopic surgery, laparotomy increased the surgical trauma significantly. The intraoperative blood loss in the WJ group also increased significantly. It was mentioned in the discussion that the volume of saline used in WJ was calculated together with the volume of blood loss. Considering that CUSA also uses saline during the operation, this explanation is far-fetched. Therefore, WJ lack sufficient surgical advantages in terms of trauma and blood loss. 4. The highest postoperative AST/ALT indicated the severity of liver injury, which was correlated with the extent of liver wound, liver ischemia time, intraoperative blood loss and other factors. In addition, the area of denaturation was strongly correlated not only with thermal damage, but also

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with anatomic resection. The causal relationship between postoperative AST/ALT and area of denaturation cannot be simply determined. In addition, although the highest postoperative AST/ALT showed the severity of liver injury, surgeons are more concerned about the mid- and long-term effects of surgical operations on liver function, such as liver function status within 1 week or 1 month, and postoperative complications rate and severity.

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Reviewer's code: 04015916
Position: Editorial Board
Academic degree: MD, PhD

Professional title: Professor

Reviewer's Country/Territory: China

Author's Country/Territory: Japan

Manuscript submission date: 2021-11-08

Reviewer chosen by: Jia-Qi Zhu (Online Science Editor)

Reviewer accepted review: 2022-02-28 11:53

Reviewer performed review: 2022-03-08 02:08

Review time: 7 Days and 14 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
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Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

In general liver resection, the remnant functioning liver volume is one of the important indicators to determine the scope of liver resection, and it is also one of the important indicators to evaluate whether the patient can undergo surgical resection. It is closely related to the patient's basic liver disease, the degree of liver cirrhosis, the degree of liver fibrosis, the location of the liver segment where the liver tumor is located, the amount of intraoperative blood loss, the operation time, and the time of the first porta hepatectomy. As for the type of energy instrument used to remove liver tissue during surgery, the loss of liver tissue caused by it is almost negligible in clinical work, and has little effect on the remaining functional liver volume. The significance of this article for the guidance of clinical work is not significant.