PEER-REVIEW REPORT

Name of journal: *World Journal of Gastrointestinal Surgery*

Manuscript NO: 80887

Title: Endoscopic ultrasound-guided intraportal injection of autologous bone marrow in patients with decompensated liver cirrhosis: A case series

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 00068723

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Doctor, Occupational Physician

Reviewer's Country/Territory: Japan

Author's Country/Territory: China

Manuscript submission date: 2022-10-17

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-11-22 04:53

Reviewer performed review: 2022-11-23 00:06

Review time: 19 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [ ] Grade C: Good [Y] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [ ] Grade B: Minor language polishing [Y] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [ ] Minor revision [Y] Major revision [ ] Rejection
Re-review	[ ] Yes [Y] No

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

SPECIFIC COMMENTS TO AUTHORS

The authors performed bone marrow transplantation via portal vein with endoscopic ultrasound (EUS). This technique seemed promising. But there were several unclear points to evaluate this study correctly.   Logical flow to the bone marrow transplantation with EUS was not clear. Did the authors have any proof-of-concept data? Or was the technique performed as a brainstorm?   How would the authors speculate where the transplanted cells reside? Or did they disappear? The authors counted the number of CD34 positive cells. How was "CD34" featured?   The authors probably expected that the transplanted cells resided in the liver. If so, how would the authors obtain evidence of homing of the transplanted cells in liver? Bone marrow transplantation to liver insufficiency has been reported. For example, infusion into peripheral vein. Did the authors refer the literatures? What was the significance of the authors' study as compared to the previous studies? Where were the samples obtained as bone marrow aspiration?   Were the bone marrow samples subjected to transplantation immediately after aspiration of bone marrow? If so, bone marrow sampling performed in the same room as the EUS transplantation? Was the flowcytometry performed after the transplantation?   The enrolled patients had ascites. Did the ascites cause complications? For example, bleeding after the EUS guided transplantation.   Figure 3. What is "ascites (mm)? Were there any possibilities that measuring methods affected that (mm)? Figure 4. A showed slight change during the observation period. In Figure 4B, percentage of Child-Pugh Scores seemed change dramatically. For example, C disappeared in post 1m, 6m, and 12m. Child-Pugh A occupied majority in post 3m and 6m. How would the authors speculate the trends of

the data?　Table 1. What is "ascites (mm)"?

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Reviewer's code: 02468626

Position: Editorial Board

Academic degree: MD

Professional title: Associate Professor

Reviewer's Country/Territory: Italy

Author's Country/Territory: China

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Review time: 3 Days and 18 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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SPECIFIC COMMENTS TO AUTHORS

The authors reported 5 patients who were treated by EUS-FNI of stem cells in the portal vein for the treatment of decompensated liver cirrhosis. The paper is potentially interesting, but some major drawbacks should be acknowledged. 1) This paper is best defined as a "case series" rather than a "pilot study". Please change the title accordingly. 2) In the text it should be said that the stem cells were "infused" rather than "transfused". 3) For the sake of consistency, either "stem cells injection" or "bone marrow injection" should be written in the text. How was the aspirated bone marrow treated and harvested? Was it used as a whole for injection, just right after aspiration? On the other hand, was it somehow treated and preserved?   4) Endoscopic procedure. You mentioned that 30 ml of bone marrow + 10 ml of heparin were injected at a 1ml/min velocity. This means that 40 mins were required for the whole injection. Can you confirm? How was the infusion rate determined beforehand? How was it possible to maintain the needle stability inside the PV for such a long time?   5) Patients. To understand the results, concomitant treatments should be mentioned. Were the patients under antiviral therapy against hepatitis B? Were diuretics either started or adjusted after the diagnosis of ascites? 6) Results. It seems unfair to talk about significant improvement in a study with 5 patients. I think this can be referred to as a feasibility and safety study, but I would refrain from any evaluation of statistical significance.   7) How was ascites measured in mm? 8) The sentence "Other indexes showed a slight fluctuation during the follow-up period" is too generic and should be removed. The results of elastography are not reported at follow up.   Minor remarks 1) Abstract. "Compensated cirrhosis" instead of "compensatory"   2) Endoscopic procedure. Use "echoendoscope" and not "ultrasonic gastroscope". Use

"stylet" and not "probe". 3) Discussion. "Autologous" and not "autogenous".