

Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: The Authors present an interesting case report describing closure of APS with PVE in a patient with advanced HCC, to enable reduction of HPS and TARE. the case is interesting and has some potential hypothesis generating value. some remarks: - the case is presented in a fragmented fashion. can the Authors make it more discursive? - the diagnosis was HCC in BCLC-C stage. Why did the MDT decided to go for TARE, rather than medical therapy? - the hypothesis generating nature of the case should be stressed.

Response: Many thanks for your suggestions. In clinical practice in China, local intervention therapy combined with systemic drug therapy is a commonly used treatment plan for advanced HCC. We had made correction in the revised manuscript. (The Treatment Segment: The MDT made the treatment plan of combining Y-90 TARE with the anti-PD-1 antibody and the anti-VEGF bevacizumab.)

Reviewer #2:

Scientific Quality: Grade D (Fair)

Language Quality: Grade B (Minor language polishing)

Conclusion: Major revision

Specific Comments to Authors: Review of: Portal vein embolization for closure of marked arterioportal shunt of hepatocellular carcinoma to enable radioembolization: A case report In this case report, the authors applied portal vein embolization in order to perform TARE in a HCC subject exhibiting arterioportal shunt. The procedure was successful and the patient underwent TARE without significant adverse events. This case raises the following observation:

1) The authors should explain why the portal vein approach was followed, instead of the more validated (and possibly less invasive) transarterial shunt embolization (PMID: 30419830). This seems to be a critical point and the reason for this clinical choice should be clearly stated in the manuscript.

Response: Many thanks for your suggestion. Transarterial shunt embolization may theoretically result in suboptimal treatment response following TARE, which we stated in the discussion segment of the manuscript: "Standard techniques of transarterial bland embolization or chemoembolization can be used to shut down large arteriovenous and arterioportal shunts ^[16,17]. Ward *et al* ^[17] showed a reduction of 29%–69% in HPS in five patients who had embolization procedures. However, excessive transarterial embolization may theoretically result in suboptimal treatment response following TARE because of uneven microsphere distribution."

2) As reported in the previous literature (PMID: 23729977), ipsilateral portal thrombosis (observed in this case) is generally considered a contraindication to portal vein embolization due to difficulties in achieving an adequate result and the risk of increased portal hypertension. Comment on these aspects in the discussion and explain why these points were not a limitation in this case. In addition, include data on the sign of portal hypertension (upper endoscopy) and echo Doppler study of liver hepatic flow.

Response: In this case, CT and MRI showed carcinoma thrombus formation in the main and right portal vein branches; and abundant collateral circulation with spongy degeneration (which we stated in the *Imaging examination* segment). Abundant collateral circulation with spongy degeneration may theoretically reduce the risk of portal hypertension caused by PVE. Many thanks for your meaningful suggestion. We had made supplementary discussion in the revised manuscript: In addition, PVE may further exacerbate portal hypertension and lead to gastrointestinal bleeding.

3) In the text, please state if the patient gave his consent to publish these data.

Response: Many thanks for your suggestion. We had made supplementary statement in the “Title page” Segment. (Approval for publishing the study data was obtained from the patient.)