

## **Point-to-point responses to the reviewers' comments**

We would like to express our sincere thanks to the reviewer for the constructive and positive comments.

### Specific comments

#### **GENERAL COMMENTS**

(1) The importance of the research and the significance of the research contents;

Hepatocellular carcinoma (HCC) is the third most common cause of cancer-related death worldwide. (1) Portal vein thrombosis (PVT) is a common complication of HCC, which is associated with a poor prognosis. Patients with PVT are more likely to have metastatic disease at diagnosis, have fewer therapeutic options, and have shortened overall survival compared to patients without PVT.

Resection for patients with major vascular invasion is described as controversial, but may be considered. Surgical resection is often technically infeasible in patients with PVT, and is associated with poorer outcomes. Hepatic resection with curative intent is controversial and infrequently employed in American and European centers, but may offer favorable overall survival in selected patients, especially those with branch portal vein involvement and good liver function.

The Hong Kong Liver Cancer (HKLC) staging system (2) separates extrahepatic from intrahepatic vascular invasion, and generally recommends aggressive management of early and intermediate disease. Surgical resection for HCC with PVT is frequently employed across Asia (3), where hepatitis B is more common as a predisposing risk factor and patients tend to have better underlying liver function.

The authors of this article have been evaluated the case report which describe the application value of cystoscope in surgical treatment of HCC with portal vein tumor thrombus. The importance and significant of the research contents is high, because those patients who have HCC with portal vein tumor thrombus, involving a branch portal vein have small amount of therapeutic options and “... *ensuring the complete removal of tumor thrombus during operation is critical to improve the prognosis.*”. Thrombus involving the main portal vein is a worse prognostic factor than thrombus involving a branch portal vein (4) and examination of cavity of main portal vein after thrombectomy is essential for improving the outcome.

2) The novelty and innovation of the research;

*Li N et al.* present the case of application of cystoscope in surgical treatment of hepatocellular carcinoma with portal vein tumor thrombus as an effective, safe, simple technique for ensuring the complete removal of tumor thrombus, which could provide a substitution of intravascular endoscope to visualize the cavity of portal vein

The novelty of the research represents the idea that this technic could achieve sufficient examination the cavity of portal vein, eliminated the possibility of residual and scattered macroscopic tumor thrombus in portal vein, and further ensured the curability of thrombectomy.

(3) Presentation and readability of the manuscript;

Case report is well organized.

(4) Ethics of the research.

The study was reviewed and approved by the Institutional Review Board of Eastern Hepatobiliary Surgery Hospital and written informed consent was obtained from the patient for this research.

### **Bibliography**

1. *Forner A, Llovet JM, Bruix J* Hepatocellular carcinoma. *Lancet*. 2012 Mar 31; 379(9822):1245-55.
2. *Yau T, Tang VY, Yao TJ, Fan ST, Lo CM, Poon RT*. Development of Hong Kong Liver Cancer staging system with treatment stratification for patients with hepatocellular carcinoma. *Gastroenterology*. 2014 Jun; 146(7):1691-700.e3.
3. *Omata M, Lesmana LA, Tateishi R, Chen PJ, Lin SM, Yoshida H, Kudo M, Lee JM, Choi BI, Poon RT, Shiina S, Cheng AL, Jia JD, Obi S, Han KH, Jafri W, Chow P, Lim SG, Chawla YK, Budihusodo U, Gani RA, Lesmana CR, Putranto TA, Liaw YF, Sarin SK*. Asian Pacific Association for the Study of the Liver consensus recommendations on hepatocellular carcinoma. *Hepatol Int*. 2010 Mar 18; 4(2):439-74.
4. *Lau WY, Sangro B, Chen PJ, Cheng SQ, Chow P, Lee RC, Leung T, Han KH, Poon RT*. Treatment for hepatocellular carcinoma with portal vein tumor thrombosis: the emerging role for radioembolization using yttrium-90. *Oncology*. 2013; 84(5):311-8.

**Answer: No specific issue raised. Thank you for your compliment.**

## **SPECIFIC COMMENTS**

**Title:** accurately reflects the major topic and contents of the study.

**Abstract:** it is gives a clear delineation of the research background. The objective is presented in the case report. As summarized, the case of 61-year-old male suffered hepatocellular carcinoma with a 7-cm tumor in the right lobe of liver, with tumor thrombus invaded the right branch and was adjacent to the conjunction of portal vein.

The case report is well organized. Discussion presents the systematic theoretical analyses. The valuable conclusions are not provided.

**Answer: The conclusion was amended.**

**Introduction:** present relevant information about HCC, portal vein tumor thrombus, necessity of thrombectomy and ensuring the complete removal of thrombus during operation and the idea how cystoscope may be successfully applied as a substitute of intravascular endoscope to visualize the cavity of portal vein.

### **Case report**

*Case report* had not presented laboratory tests (liver function), if patients had liver cirrhosis - stage of cirrhosis (Child-Pugh score, Fibroscan and liver biopsy) had not presented, etiology of liver disease had not presented.

**Surgical procedures** had presented in detail.

**Answer: Several sentences were added in the text to describe the information mentioned in the comment.**

**Result.** Perioperative clinical characteristics and imaging after 8 months were not presented, it will be increase readability of the manuscript.

**Answer: Perioperative clinic information was added in the text. However, the postoperative CT imaging wasn't available for the CT examination was carried out in local hospital.**

**Discussion.** *Li N et al.* represent the idea that the application of cystoscope in surgical treatment of hepatocellular carcinoma with portal vein tumor thrombus is effective, safe, simple technique for ensuring the complete removal of tumor thrombus, which could provide a substitution of intravascular endoscope to visualize the cavity of portal vein.

### **Conclusions**

The authors had not presented valuable conclusion.

**References:** references are appropriate, relevant, and updated.

**Tables and figures:** figures are relevant

**Answer: Several sentences were added in the text to draw a specific conclusion.**