

Hepatocellular Carcinoma with Portal Vein Tumor Thrombus versus Hepatocellular Carcinoma with Biliary Tumor Thrombus: Better or Worse Prognoses? [Letter]

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Jin-Kai Feng
Ju-Xian Sun
Zong-Han Liu
Shu-Qun Cheng

Department of Hepatic Surgery VI,
Eastern Hepatobiliary Surgery Hospital,
Second Military Medical University,
Shanghai, 200433, People's Republic of
China

Dear editor

We read with great interest the recently published article in *Cancer Management and Research* by Yang et al,¹ in which they conducted a retrospective study to compare the long-term prognosis between hepatocellular carcinoma (HCC) patients with portal vein tumor thrombus (PVTT) and those with bile duct tumor thrombus (BDTT). The authors reported that HCC patients with BDTT had worse overall survival (OS) and a higher tumor recurrence rate compared to patients with PVTT. This article, with its novelty and clinical implication, adds to the current knowledge and provides the rationale for further study to assess the prognostic differences among HCC patients with distinct types of tumor thrombus. However, we would like to raise the following concerns.

First, the number of patients in this study is too small to draw a conclusive result regarding whether the prognosis of BDTT patients is inferior or superior to that of PVTT patients. Sufficient sample size is a critical factor to guarantee the validity and credibility of scientific reports. Therefore, we suggest the authors enlarge the sample size.

Second, as shown in Table 3 and Figure 2 of their study, contradictory results existed between the multivariate analyses and survival curves. In Table 3, the authors revealed that the hazard ratios of PVTT versus BDTT were 3.71 and 2.93 for OS and time to recurrence (TTR), respectively. Conversely, Figure 2 showed that HCC patients with PVTT had better OS rates and lower recurrence rates than patients with BDTT. Previously, Kokudo et al² reported that for HCC patients with PVTT with Child-Pugh A liver function, the median survival time (MST) after liver resection (LR) was 2.87 years, and the survival rates at 1, 3, and 5 years were 74.8%, 49.1%, and 39.1%, respectively. Regarding the surgical outcomes of HCC with BDTT, Kim et al³ reported that the MST was 45.8 months, and the 1-, 3-, 5-year OS rates were 74.5%, 52.9%, 43.6%, respectively. Based on the above data, it appears reasonable to believe that the prognosis of patients with BDTT is non-inferior to patients with PVTT.

Third, the clinicopathological characteristics analyzed in this study seemed far from enough. In addition to the demographic, biochemical, and tumor-related

Correspondence: Shu-Qun Cheng
Eastern Hepatobiliary Surgery Hospital,
Second Military Medical University, 225
Changhai Road, Shanghai, 200433,
People's Republic of China
Tel +86 21-81875251
Fax +86 21-65562400
Email chengshuqun@aliyun.com

variables in Tables 1–2, some other frequently reported variables, such as patients' performance status and Child-Pugh classification, should be incorporated, because these are also potential risk factors that would possibly associate with the prognosis of HCC patients with tumor thrombus after LR. Hence, we suggest the authors supplement some essential variables here.

The prevalence rates, clinical characteristics and oncological outcomes vary dramatically between HCC patients with PVTT and those with BDTT.^{3,4} Consequently, it is worthwhile to explore the survival outcomes of HCC patients combined with different types of tumor thrombus. The study by Yang et al was the first to compare the prognostic differences between PVTT and BDTT in HCC patients. However, due to its retrospective nature, the results derived from the study should be interpreted with caution.

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Disclosure

The authors report no conflicts of interest in this communication.

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