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The Outcomes Of Hepatic Resection For HCC With Portal Vein Tumor Thrombosis: A Multicenter Study In South Korea

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Background : The presence of portal vein tumor thrombosis (PVTT) in patients with hepatocellular carcinoma (HCC) has been regarded as an advanced stage and associated with extremely poor prognosis. Most of guidelines for the treatment of HCC have recommended non-surgical treatment such as systemic therapy or transarterial chemoembolization (TACE) rather than surgical resection in these cases. The aim of this multicenter study was to evaluate the outcomes of hepatic resection (HR) for HCC patients with portal vein tumor thrombosis.

Methods : Two hundred seventy-six HCC patients with PVTT who underwent hepatic resection between 2005 and 2019 from 17 tertiary hospitals in South Korea were included in this study. We analyzed the outcomes of hepatic resection in these patients.

Results : The extent of PVTT was as follows; Vp1 in 71 patients (25.7%), Vp2 in 72 patients (26.1%), Vp3 in 99 patients (35.9%) and Vp4 in 33 patients (12.0%). The median survival time was 30.7 months and median recurrence-free survival time was 6.7 months. The 1-, 3-, and 5-year overall survival (OS) rates were 73%, 47% and 38%. The 1-, 3-, and 5-year recurrence-free survival (RFS) rates were 41%, 31%, and 26%. HR showed better outcomes compared with published outcomes of other treatment modality such as TACE or systemic treatment. The median survival time according to the extent of PVTT were 56.0 months in Vp1/Vp2 and 23.7 months Vp3/Vp4 (p=0.007). The median recurrence-free survival time according to the extent of PVTT were 11.2 months in Vp1/Vp2 and 4.9 months in Vp3/Vp4 (p=0.009). Perioperative mortality rate was 2.9 % and postoperative complications with Clavien-Dindo classification grade III or above were seen in 44 patients (15.9%).

Conclusions : HR may lead to better survival outcomes compared with other treatment in HCC patients with PVTT. HR should be considered in selected patients with resectable HCC associated with PVTT.

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