

Symposium I

Controversial Indication of Hepatic Resection in Various Practical Guidelines: HCC with Portal Vein Thrombosis

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Hepatocellular carcinoma (HCC) tends to invade the intrahepatic vasculature, especially the portal vein and the source of the portal vein tumor thrombosis (PVTT). PVTT is found in about 13~62% of HCC patients. Macroscopic tumor thrombus in the PV appears to be terminal stage of HCC because of extensive intrahepatic metastasis and recurrence after treatment. PVTT is associated with the threat of bleeding of the esophageal varices due to increased portal venous pressure, or liver failure due to decreased portal flow. The prognosis of HCC with main PVTT is extremely poor if left untreated: the reported median survival time is about 3~4 months, whereas survival in those without PVTT is 24 months.

The management of HCC with PVT is complicated and controversial. PVTT was considered a relative or absolute contraindication to surgical resection. Only conservative and palliative treatments were available. Recently, many strategies such as surgical resection, transcatheter arterial chemoembolization (TACE), systemic or regional chemotherapy, and radiotherapy have been used to treat HCC with PVTT to improve this dismal prognosis. TACE was contraindicated for in case of PVTT because of impending threat of ischemic hepatic damage. However, some reports have shown TACE to be safe if the selected patients have good hepatic reserve and collaterals around the portal trunk. The efficacy of TACE has been controversial; the median survival time with this treatment is still only 3.8~9.5 months. Systemic chemotherapy with single agent has not been effective; the response rates were less than 20%. While regional chemotherapy with 5-FU combined with low-dose cisplatin or interferon through the hepatic artery has increased the response rate, the median survival time has not exceeded 12 months. Combined treatment consisting of

radiation for PVTT and TACE has achieved a high response rate, but the median survival rates were 3.8~10.7 months.

The most hopeful outcomes were reported with combined treatments that incorporated liver resection. Surgical resection with or without adjunctive chemotherapy has had higher survival rates than conservative treatment or chemotherapy. Some reports state that the benefits of hepatectomy with en bloc removal of tumor thrombus are as follows: 1) prevention of threatening ascites and varix bleeding by decreased portal hypertension; 2) improved portal blood flow and hepatic function; 3) reduced tumor burden and increased effect of multidisciplinary treatments which may kill residual tumor cells; 4) improve the survival rates. Therefore, hepatectomy and en bloc removal of tumor thrombus is the most effective therapy in patients of HCC with PVTT. As a result of hepatic resection and PVTT removal as monotherapy, a 5-year survival rate and median survival time of 4%-28.5% and 6-14 months have been reported. Multidisciplinary treatments have been applied to HCC with PVTT patients; however, the results were unsatisfactory. But, some therapies have been reported to achieve promising results. Surgical resection combined with preoperative TACE and postoperative chemotherapy is the most effective therapeutic strategy for the HCC with PVTT patients who can tolerate operation. If the hepatic reserve is permitted, adjunctive chemotherapy after surgery could be suggested to prolong the survival.

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