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Long-term surgical outcomes of liver resection for hepatocellular carcinoma in patients with hepatitis B virus and hepatitis C virus co-infection: A multicenter observational study

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Introduction: Hepatocellular carcinoma (HCC) is one of the most serious consequences of chronic hepatitis B virus (HBV) or hepatitis C virus (HCV) infection. This study sought to investigate long-term outcomes after liver resection for HCC among patients with HBV/HCV co-infection (HBV/HCV-HCC) compared with patients with HBV infection (HBV-HCC).

Methods: Patients who underwent curative-intent liver resection for HCC were identified from a multicenter Chinese database. Using propensity score matching (PSM), patients with HBV/HCV-HCC were matched one-to-one to patients with HBV-HCC. Overall survival (OS) and recurrence-free survival (RFS) were compared between the two groups before and after PSM.

Results: Among 2,467 patients identified, 93 (3.8%) and 2,374 (96.2%) patients had HBV/HCV-HCC and HBV-HCC, respectively. Compared with patients with HBV-HCC, patients with HBV/HCV-HCC were older, have poorer liver-related characteristics but better tumor-related characteristics. PSM created 88 pairs of patients with comparable liver- and tumor-related characteristics (all $p > 0.2$). In the PSM cohort, the 3- and 5-year RFS rates in patients with HBV/HCV-HCC were 48.3% and 38.9%, which were significantly poorer than patients with HBV-HCC (61.8% and 49.2%, $p = 0.037$). Meanwhile, the 3- and 5-year OS rates in patients with HBV/HCV-HCC were also poorer than patients with HBV-HCC (65.4% and 51.1% vs. 73.7% and 63.0%), with a difference close to be significant between them ($p = 0.081$).

Conclusions: Comparing to patients with HBV-HCC, liver resection resulted in relatively poorer long-term surgical outcomes in patients with HBV/HCV-HCC.

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