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Rapid Viral Suppression Predicts Good Postoperative Recurrence Free Survivals In Patients With Hepatocellular Carcinoma With A High HBV-DNA Titer

Tae YOO*¹, Won Tae CHO¹, Jungwoo LEE², Jisu LEE³, Hanbaro KIM⁴, Hanbaro KIM⁵

¹Surgery, Hallym University Dongtan Sacredheart Hospital, REPUBLIC OF KOREA

²Surgery, Hallym University Hallym Sacredheart Hospital, REPUBLIC OF KOREA

³Surgery, Hallym University Kangdong Sacredheart Hospital, REPUBLIC OF KOREA

⁴Surgery, Hallym University Kangnam Sacredheart Hospital, REPUBLIC OF KOREA

⁵Surgery, Hallym University Chuncheon Sacredheart Hospital, REPUBLIC OF KOREA

Background : To investigate the significance of perioperative HBV DNA levels for predicting recurrence in HBV-related hepatocellular carcinoma (HCC) patients who underwent hepatectomy.

Methods : From 2011 to 2021, 241 HBV-related HCC patients who underwent liver resection (LR) in 5 Hallym university hospitals were enrolled (Dongtan, Kangdong, Kangnam, Pyeongchon, Cheonchun). Serum HBV DNA levels with other clinical variables were analyzed and evaluated the association of HCC recurrence.

Results : Before liver resection, there were 99 patients who had HBV DNA undetection and 142 who had positive DNA levels. Of 142 patients with positive HBV DNA levels, 72 had DNA undetection within 3 months after LR (Rapid group) and 70 had persistently DNA detection (Non-rapid group). Of rapid group, 33 showed recurrence and 30 showed recurrence in non-rapid group, Patients with rapid group had better recurrence free survival (RFS) rate than patients with non-rapid group (Mean RFS=50 vs. 38 months, $p=0.012$). In subgroup analysis, rapid group had better RFS rate in early stage (Mean RFS=62 vs. 47 months, $p=0.005$), however, RFS rates between two groups was comparable in advanced stage. Also, in 142 patients with positive HBV DNA levels, rapid HBV undetection (HR=1.71, $p=0.022$) as well as male (HR=1.96, $p<0.018$), large tumor size (HR=2.74, $p<0.001$), multiple tumor (HR=3.17, $p<0.001$), microvascular invasion (HR=1.71, $p<0.028$) were independent risk factors for RFS in multivariate analysis.

Conclusions : Rapid HBV DNA undetection after LR is associated with better prognosis for recurrence in HBV-related HCC patients.

Corresponding Author : **Tae YOO** (youts@hanmail.net)