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IMPACT OF DIRECT-ACTING ANTIVIRAL THERAPY TIMING ON HEPATOCELLULAR CARCINOMA RECURRENCE AFTER LIVER RESECTION IN HEPATITIS C PATIENTS: A MULTICENTER RETROSPECTIVE STUDY

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Background : In patients with hepatitis C virus (HCV) undergoing liver resection for hepatocellular carcinoma (HCC), it is unclear whether the timing of direct-acting antiviral (DAA) therapy initiation affects HCC recurrence.

Methods : We conducted an international retrospective cohort study across seven institutions. Adults who underwent liver resection for HCV-related HCC and achieved sustained virologic response after receiving DAA therapy from 2014 onwards were included. A multivariable, time-dependent Fine-Gray competing risks mixed-effects model was used to estimate subdistribution hazard ratios (HR) for HCC recurrence.

Results : We identified 194 patients, with a median follow-up after surgery of 6.3 years (95% CI: 5.4, 7.1). The median tumor size was 2.1 cm (Q1, Q3: 1.9, 4.0 cm), and 91% had unifocal tumors. Recurrence occurred in 39.7% of patients, with a median time to recurrence of 2.0 years. The 1-, 3-, and 5-year overall survival rates were 91.1%, 74.9%, and 67.7%, respectively. The 1-, 3-, and 5-year recurrence-free survival rates were 82.3%, 51.0%, and 37.9%, respectively. DAA initiation between 5.6 and 6.6 months after surgery was associated with a higher risk of HCC recurrence (adjusted HR: 1.03; 95% CI: 1.00, 1.06). Although initiating DAA outside this time frame did not reach statistical significance, there was a linear trend toward a lower risk of HCC recurrence with earlier DAA initiation within the 24-month period before and after surgery.

Conclusions : In patients undergoing HCV-treated HCC resection, earlier DAA initiation was associated with a lower risk of HCC recurrence after surgery.

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