論 文 要 旨

Hypovascular tumors developed into hepatocellular carcinoma at a high rate despite the elimination of hepatitis C virus by direct-acting antivirals

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Background and Aims: Direct-acting antivirals (DAAs) against hepatitis C virus (HCV) exert high anti-HCV activity and are expected to show anti-inflammatory effects associated with HCV elimination. Furthermore, hepatocellular carcinoma (HCC) is known to dedifferentiate from hypovascular tumors, such as dysplastic nodules or well-differentiated HCC, to hypervascular tumors. We therefore explored whether or not DAAs can suppress the growth and hypervascularization of hypovascular tumors.

Methods: We enrolled 481 patients with HCV genotype 1 infection who were treated with Daclatasvir and Asunaprevir therapy. Of these, 29 patients had 33 hypovascular tumors, which were confirmed by contrast-enhanced MRI or CT before therapy. We prospectively analyzed the cumulative incidence of HCC, i.e. the growth or hypervascularization of hypovascular tumors, and compared the HCC development rates between patients with hypovascular tumors and those without any tumors.

Results: The mean size of the hypovascular tumors was 11.3 mm. Twenty seven of 29 patients who achieved an SVR had 31 nodules, 19 of 31 nodules (61.3%) showed tumor growth or hypervascularization, and 12 (38.7%) nodules showed no change or improvement. The cumulative incidence rates of tumor growth or hypervascularization were 19.4% at 1 year, 36.0% at 2 years, 56.6% at 3 years, and 65.3% at 4 years. Among the patients who achieved a sustained virologic response, the cumulative HCC development rates of patients with hypovascular tumors was significantly higher than in those without any tumors. A Cox proportional hazard analysis showed that a history of HCC therapy, the presence of a hypovascular tumor, and AFP >4.6 ng/mL at the end of treatment were independent risk factors for HCC development.

Conclusion: Hypovascular tumors developed into HCC at a high rate despite the elimination of HCV by DAAs. As patients with hypovascular tumors were shown to have a high risk of HCC development, they should undergo strict HCC surveillance.