Prediction of liver stiffness for hepatocellular carcinoma in chronic hepatitis C patients on interferon-based anti-viral therapy

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(インターフェロン治療を施行した C 型慢性肝炎患者の肝硬度測定による肝発癌予測)

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Abstract

Background and Aim: The purpose of this study was to evaluate the usefulness of liver stiffness measurement (LSM) for assessing the risk of hepatocellular carcinoma (HCC) in chronic hepatitis C (CHC) patients receiving interferon (IFN) therapy.
Methods: One hundred fifty-one CHC patients who underwent LSM and received IFN therapy were included in the estimation cohort, and 56 were included in the validation study. The cumulative HCC incidences were evaluated using Kaplan-Meier plot analysis and the log-rank test. Multivariate Cox proportional hazard analyses were used to estimate the hazard ratios (HRs) of variables for HCC.
Results: In the estimation cohort, 9 of 151 patients developed HCC during the median follow-up time of 722 days. Multivariate analysis identified 3 independent risk factors for HCC: LSM (≥14.0 kPa, HR 5.58, P = 0.020), platelet count (<14.1 × 104/μL, HR 5.59, P = 0.034), and non-sustained virological response (HR 8.28, P = 0.049). The cumulative incidence of HCC development at 3 years was 59.6%, 8.2%, and 0.0% in patients with all 3 risk factors, 1–2 risk factors, and none of these risk factors, respectively. The incidence of HCC was significantly different between these groups (P < 0.001). In the validation cohort, HCC incidence was also significantly different with respect to these risk factors (P = 0.037).
Conclusion: LSM, platelet count, and IFN-therapeutic effect could be used to successfully stratify the risk of HCC in patients receiving IFN therapy and demonstrate the usefulness of LSM before IFN therapy for the management of CHC patients.