中文題目：C 型肝炎經干擾素治療後發生肝癌的特徵與預後之比較

英文題目：The comparison of clinical characteristics and prognosis of new hepatocellular carcinoma development after interferon-based therapy for chronic hepatitis C between patients with sustained and non-sustained virologic response

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Background:

Clearance of hepatitis C (HCV) reduced the incidence of hepatocellular carcinoma and improved patients' survival, but the risk was not completely eliminated after viral eradication. Previous studies showed the characteristic of hepatocellular carcinoma (HCC) and the prognosis of patients in other countries but was not well known in Taiwan. This study aims to compare the characteristics and prognosis of HCC between HCV patients with SVR and non-SVR after antiviral therapies.

Methods:

We reviewed 1903 patients who had received interferon treatment for HCV between January 2006 to February 2013. Laboratory data were collected at least 1 year after IFN-based therapy and to the latest follow-up. Data on a-fetoprotein (AFP) were obtained 6 months prior to HCC development to exclude HCC-related AFP elevation. AST-to-platelet ratio index (APRI) and fibrosis-4 (FIB-4) were collected at least 1 year after interferon treatment. The outcome was assessed by the Cox proportional hazard regression method. Kaplan–Meier curves with the log-rank test were used to assess the cumulative survival of HCV with HCC between SVR and non-SVR.

Results:

There are 124 of 1903 (6.46%) patients who had developed HCC. 26 patients lost follow up after HCC diagnosis. 41 of 1341 (3.06%) were SVR, and 57 of 536 (10.63%) were non-SVR patients. non- SVR patients tend to have higher total bilirubin before HCV antiviral treatment (1.2 ± 0.6 vs 1.0 ± 0.3, p= .048), higher APRI (4.1 ± 7.8 vs 1.8 ± 3.2; p= .007), higher FIB-4 (13.8 ± 19.6 vs 5.5 ± 6.8; p=.001), lower platelet count (92.8 ± 41.8 vs 144.9 ± 67.5, unit: $x10^4/\mu L$; p< .005) and higher proportion of cirrhosis before HCC development (70% vs 94.7%; p=.001).

Non- SVR patients had a higher HCC recurrence rate than SVR patients (p= .0046). Univariate analysis showed high APRI (≥ 0.7), high FIB-4 (≥ 3.25), low platelet count (<$150x10^4$/uL), total bilirubin ≥2 before HCV antiviral treatment and cirrhosis before HCC development as the significant risk factors associated with HCC recurrence after completing IFN and ribavirin therapy, but FIB-4 ≥ 3.25 (hazard ratio [HR] 3.31; 95% confidence interval [CI] 1.45-7.53; P = .004) and total bilirubin ≥2 (hazard ratio [HR] 2.93; 95% confidence interval [CI] 0.99-6.65; P = .052) as the independent risk factors of HCC recurrence.

SVR patients had a longer overall survival than non- SVR patients (p= .04). Univariate analysis showed AFP ≥20, total bilirubin ≥2 before HCV antiviral treatment and HCC recurrence as significant risk factors associated with the mortality in the patients with HCC development. In multivariate analysis, AFP ≥20 (hazard ratio [HR] 2.93; 95% confidence interval [CI] 1.13-7.64; P = .028), HCC recurrence (hazard ratio [HR] 7.49; 95% confidence interval [CI] 1.71-32.89; P = .008)

are the independent risk factors of all caused mortality in HCC after interferon plus ribavirin therapy.

Conclusion:

Patients with HCV after interferon and ribavirin treatment, FIB-4 is associated with HCC recurrence and AFP 6 months before HCC diagnosis is predictive of subsequent mortality. SVR patients had lower recurrence and longer survival rates than those of non-SVR patients after development of HCC.