中文題目：連續性血清 MHC class I chain-related A 蛋白預測 C 肝病毒清除後肝癌發生風險

英文題目：Serial serum MHC class I chain-related A measurements for the prediction of hepatocellular carcinoma in chronic hepatitis C patients after curative antiviral therapy

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Background/Aims

MHC class I chain-related A (MICA) genetic variants and their serum levels (sMICA) have been associated with the development of hepatitis C virus (HCV)-induced hepatocellular carcinoma (HCC) in untreated cohorts. However, the dynamic changes in serial sMICA levels in patients after anti-HCV treatment and their association with the development of HCC is elusive.

Methods

Single nucleotide polymorphism rs2596542 of MICA and serial sMICA levels were analyzed in chronic hepatitis C (CHC) patients with a sustained virologic response after antiviral treatment. Forty-two patients who developed HCC and another 84 age-, gender- and cirrhosis propensity score-matched non-HCC controls were compared. Serial sMICA levels were measured at three time points: within 6 months before treatment initiation (pre-sMICA), 6 months after the end of treatment (post-sMICA) and on the last visit before the development (or not) of HCC (last-sMICA).

Results

Compared to patients who did not develop HCC, those with HCC had lower platelet counts, higher levels of post-sMICA (197.4±398.0 pg/mL vs. 57.6±89.6 pg/mL, P=0.03) and last-sMICA (320.4±508.4 pg/mL vs. 37.7±140.2 pg/mL, P<0.001). A Cox regression analysis revealed that last-sMICA was the only predictive factor of HCC development (hazard ratio [HR]/ 95 % confidence intervals [CI.]: 2.27 (per 1 log pg/mL increase)/1.672-3.082, P<0.001**).** Patients without HCC showed a significantly reduced trend of sMICA levels during follow-up (trend P=0.001). In contrast, HCC patients showed an increased trend of sMICA levels (trend P=0.024). MICA rs2596542 GG genotype carriers without HCC showed a significantly decreased trend of sMICA levels during follow-up (trend P<0.001). In contrast, HCC patients who carried the GG genotype showed a substantially increased trend of sMICA levels (trend P=0.06). Both trends were not observed in A allele carriers, with or without HCC development.

Conclusions

Serial sMICA levels could serve as a surrogate marker for HCC development in CHC patients with a SVR. The clinical utility of this finding is restricted to MICA rs2596542 GG genotype carriers.

Keywords: CHC, HCV, HCC, MICA, SNP, sMICA