Abstract

Hepatocellular carcinoma (HCC) induced by chronic hepatitis B virus infection is a major health problem in Taiwan. The HBV carrier presents 100-fold increase in risk to develop into HCC. Therefore, it is an important public health issue to early diagnose and treat HBV infection. The HBV surface antigen is an important marker for estimating HBV infection. In the late or nonreplicative stage of HBV infection, a novel type of HBS mutation, the pre-S mutation, has been identified. Such mutations have shown high correlation with HCC progression. In this study, the pre-S mutation rates have been analyzed to decide whether the pre-S mutations show predisposition to HCC. We suggest that the pre-S HBsAg could offer a useful marker to anticipate the HCC risk cause by chronic HBV infection. The major study findings are: (1) In sera of the patients with HBV-related HCC, the incidence of pre-S mutant HBsAg is higher than 50%, indicating that the pre-S mutant HBsAg is associated with the HCC caused by chronic HBV infection. (2) Among the HBeAg(+) patients, the pre-S mutant HBsAg appears at higher rates in the HCC patients as compared with the non-HCC patients. (3) The pre-S mutant HBsAg appears more often in the patients with low virus titer, indicating that the pre-S mutant HBsAg emerges at the late or non-replicative phase of HBV infection. (4) The rates of pre-S HBsAg in patients with B or C genotype of HBV are not significantly different, indicating that the HBV genotype, at least the B/C type, does not affect the incidence of the pre-S mutant HBsAg. We will continue the anaylsis in the second year of study, and hope that the pre-S mutant HBsAg offer a useful marker for HBV-related HCC.

Keywords：HBV；Hepatocellular carcinoma；HBV surface antigen；Pre-S mutant