中文題目:慢性 B 型肝炎患者經肝炎藥物貝樂克治療 3 年後表面抗原定量值下降預測 英文題目:Quantitative hepatitis B surface antigen declines in chronic hepatitis B patients after 3 years of entecavir treatment

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**Background:** The role of quantitative hepatitis B surface antigen (HBsAg) levels in patients receiving oral antiviral therapy is controversial

**Objections:** The rate and predictors of achieving a low quantitative hepatitis B surface antigen (qHBsAg) or significant decline in the qHBsAg levels in chronic hepatitis B (CHB) patients after 3 years of entecavir therapy

**Materials and methods:** A total of 223 chronic hepatitis B patients who received entecavir 0.5 mg QDfor more than 3 years (range 36-78 months) and stopped entecavir treatment were enrolled. Of the 223 patients, 62 received entecavir for  $\geq$  4 years. All patients fulfilled the stopping criteria of the APASL 2012. We determined the serum qHBsAg at baseline, at month 12, at month 36 of treatment and at the end of treatment (if treatment duration  $\geq$  4 years). A significant decline in the qHBsAg levels was defined as > 1 log reduction from baseline to at the end of treatment.

Results: Of the 223 patients (181 males and 42 females with a mean age of 467.1±12.0 years), 73 were positive for HBeAg and 150 were negative for HBeAg at the start of treatment. The mean of qHBsAg levels (log IU/mL) at baseline, month 12 and 36 were 3.2±0.9, 2.8±0.8 and 2.6±0.9, respectively. At month 36 of treatment, 4 (1.8%), 12 (5.4%) and 38 (17%) patients achieved HBsAg loss, qHBsAg<10 IU/mL and <100 IU/mL respectively, and 52 (23.3%) patients achieved qHBsAg decline > 1 IU/mL. Of the 52 patients who received entecavir ≥ 4 years, the qHBsAg decline from 3 year to end of treatment was 0.25±0.45 log IU/mL. Among the patients who did not achieve qHBsAg<10 IU/mL (n=57) or <100 IU/mL (n=46) at 3 years of treatment, 8 patients achieved qHBsAg<10 IU/mL (n=4) or <100 IU/mL (n=6) at end of treatment. Longer treatment duration, HBV genotype B and lower qHBsAg levels at baseline are independent predictors for achieving qHBsAg<100 IU/mL at the end of treatment. Furthermore, old age, HBV genotype B, baseline ALT>200 U/L, higher baseline HBV DNA and qHBsAg levels were independent predictors for the significant decline in the qHBsAg level at the end of treatment. The baseline HBsAg of 321.4 IU/mL was the optimal cut-off value to predict end-of-treatment HBsAg<100 IU/mL.

**Conclusions:** Chronic hepatitis B patients treated with entecavir therapy for more than 3 years could achieve about 20% low qHBsAg and a significant HBsAg decline levels.