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## Virologic and clinical characteristics of HBV genotypes/subgenotypes in chinese pediatric patients with chronic Hepatitis B

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**Background:** The association of hepatitis B virus(HBV) genotypes/subgenotypes with clinical characteristics is increasingly recognized. However, the virologic and clinical features of HBV genotypes/subgenotypes in pediatric patients remain largely unknown.

**Purpose:** To analyze the relationship among the genotypes/subgenotypes and NA resistance as well as the disease progression in pediatric patients with CHB.

**Methods:** Four hundred and eighty-seven pediatric patients with CHB were investigated, including 217 nucleos(t)ide analog-experienced patients. HBV genotypes/subgenotypes and reverse transcriptase (RT) mutations were determined by direct sequencing. The stage of fibrosis and degree of inflammatory activity were evaluated by the Metavir score system.

**Results:** Among 487 enrolled pediatric patients, HBV genotype C2 and B2 were the most two prevalent(73.7% and 21.1%). The subgenotype distribution were as follows: 1(0.2%) for B1, 103 ( 21.1%) for B2, 1 ( 0.2 %) for B3, 3(0.6%) for B4, 7 (1.4%)for C1, 359 ( 73.7%) for C2, 5 ( 1.0 %) for C3, 2 ( 0.4%) for C4, and 6( 1.2 %) for D, No other genotypes (A, E, F, G, or H) were detected in enrolled samples of this study. Comparing with HBV/B2 infected patients, no significant difference was observed in the incidence rate and mutant patterns of lamivudine- or adefovir-resistant mutations in HBV/C2 infected patients ( $P > 0.05$ ). Importantly, we found that hepatic inflammation degree, fibrosis stage and ALT level were significantly higher in HBV/C2-infected HBeAg positive patients than did HBV/B2-infected ones.

**Conclusion:** The pediatric patients with HBV/C2 infection were more susceptible to develop severe liver pathogenesis.