Cessation of Nucleos(t)ide Analogue treatment after HBeAg seroconversion is associated with a 4-fold increased risk of relapse in cirrhotic compared to non-cirrhotic patients

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Rapid, persistent HBV DNA suppression was predictive for HBeAg seroconversion (HR 0.955; p<0.001 per month increment) when results were adjusted for the presence of cirrhosis, HBV DNA and ALT levels at start of treatment in a multivariate Cox regression model. Treatment was stopped in 70 patients (of whom 11 were cirrhotic at baseline) after HBeAg seroconversion and a subsequent median consolidation therapy of 8.8 months. The median follow-up duration after treatment stop was 3.0 years during which 30 patients (43%) showed relapse (16 solely virologic, 14 combined biochemical and virologic), necessitying retreatment in 22 cases. HBeAg seroreversion was observed in 6/30 (20%) relapsed patients. Multivariate Cox regression model showed that the presence of cirrhosis (HR 4.350; p=0.027) at start of treatment predicted relapse after NA stop when results were adjusted for ethnicity and age at NA stop. In addition, relapse after NA stop was accompanied by liver-related death in two patients.

Conclusion: In a predominant Caucasian population, treatment cessation after HBeAg seroconversion led to relapse in 43% of the patients within a median follow-up duration of 3.0 years. Presence of cirrhosis at start of treatment was associated with a 4-fold increased risk of relapse after treatment stop. Two relapsed patients showed severe clinical events leading to liver-related death.

Disclosures:

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Regulation of antiviral CD8 T cell response by MMP mediated soluble CD100 releasing in HBV infection

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CD100 is the first semaphorin described to have immune functions and serves important roles in T cell responses. Proteolytic cleavage of CD100 from the cell surface by matrix metalloproteinases (MMPs) gives rise to a soluble fragment of CD100 (sCD100), which is also thought to have immunoregulatory properties. In this study, we characterized the expression and the possible role of CD100/sCD100 in regulating antiviral response during HBV infection in patients and HBV-replicating mouse model. We found that surface CD100 expression on T cells of chronic Hepatitis B (CHB) patients was significantly increased compared to that of healthy controls (HC). Meanwhile, CHB patients showed significantly lower concentrations of serum sCD100 than HC. Correspondingly, decreased surface CD100 expression on T cells in PBMCs and elevated serum sCD100 levels were