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Risk of Hepatitis Flare in Patients with Chronic Hepatitis B Increases Even in Short Course of High-Dose Corticosteroid Therapy – a Study of 85,763 Subjects

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Abstract Text

Background:

Hepatitis B virus reactivation during chemotherapy or immunosuppressive therapy is a major concern in HBV-endemic areas, as the mortality can be high if reactivation is complicated by fulminant hepatic failure. We studied the impact of duration and peak dose of corticosteroid on the risk of hepatitis flare in patients with chronic hepatitis B (CHB).

Methods:

All patients received corticosteroid from January 2001 to December 2004 (when oral antiviral therapy was not available in public sector) were retrieved from the Clinical Data Analysis and Reporting System of the Hospital Authority, Hong Kong. Three strata of daily dose prednisolone equivalents (<20mg, 20-40mg, >40mg) and durations (1-7; 8-27; ≥28 days) were set. Main analysis was carried out on CHB patients while non-CHB patients served as a control group. Primary endpoint was hepatitis flare (alanine aminotransferase [ALT] >2x upper limit of normal [ULN], *i.e.* 80 IU/L) at one year.

Results:

We identified 224,939 subjects prescribed with corticosteroid; 85,763 fulfilled the inclusion criteria (5,254 CHB, 80,509 non-CHB). CHB patients had higher risk of hepatitis flare (470/5,254 [8.9%]) than those without CHB (3,191/80,509 [4.0%]; $p<0.001$ by log-rank test). Among CHB patients, peak daily dose > 40mg prednisolone equivalents (adjusted hazard ratio [aHR] 1.64, 95% CI 1.26–2.14; $p<0.001$), but not prolonged duration of corticosteroid, was an independent risk factor of hepatitis flare. After combining these two factors together, patients received corticosteroid of peak daily dose > 40mg prednisolone equivalents for 7-28 days and >28 days had highest risk of hepatitis flare (aHR 1.90 and 1.64 respectively, both $p<0.001$). Nonetheless the risk started to increase in those received corticosteroid of peak daily dose > 40mg prednisolone equivalents <7 days (aHR 1.55, $p=0.026$).

Conclusion:

High peak daily dose of corticosteroid >40mg prednisolone equivalents is more important than prolonged duration as the risk factor for hepatitis flare in CHB patients. The risk starts to increase even in short course of high dose steroid for <7 days.

Disclosures

Henry Lik Yuen Chan – AbbVie: Advisory Committee or Review Panel; AbbVie: Speaking and Teaching; Arbutus: Advisory Committee or Review Panel; Gilead: Advisory Committee or Review Panel; Gilead: Speaking and Teaching; Roche: Advisory Committee or Review Panel; Vir Biotechnology: Advisory Committee or Review Panel; Intellia: Advisory Committee or Review Panel; Me

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