

Regular abstract submission

Viral Hepatitis

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LOSS OF BONE MINERAL DENSITY IN NON-CIRRHOTIC CHRONIC HEPATITIS B PATIENTS

Chalermrat Bunchorntavakul¹, Vitoon Taweewattanakitbavorn¹

¹Gastroenterology and Hepatology, Rajavithi Hospital, College of Medicine, Rangsit University, Bangkok, Thailand

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Introduction: Loss of bone mineral density (BMD) is well-documented among patients with cholestatic liver disease and advanced cirrhosis, and can be associated with significant morbidity. However, little is known about the occurrence of bone disease in chronic hepatitis B (CHB) patients without cirrhosis, particularly in Asian population.

Aims: To evaluate BMD and the prevalence of osteoporosis among patients with non-cirrhosis CHB, as well as to evaluate factors associated with BMD in such patients.

Methodology: Data of 54 consecutive CHB patients without established cirrhosis in a single tertiary center (Rajavithi Hospital, Bangkok, Thailand) in 2012 were prospectively collected. BMD assessment was performed by dual x-ray absorptiometry at the lumbar spine (LS) and the femoral neck (FN). The results of BMD were compared with mean BMD from age- and sex- matched controls from Asian population database and expressed as SD of the mean (Z-score). Osteopenia and osteoporosis were defined as BMD measurements between 1 and 2.5 (T-score -1 to -2.5) and more than 2.5 (T-score < -2.5)SD below the mean BMD for young adults, respectively.

Results: Baseline demographic and liver disease-related data were summarized in the table. The overall prevalence of osteoporosis and osteopenia were 7.4% and 38.9%, respectively. BMD in CHB patients was lower than age-matched population with mean Z-scores of -0.314 (-3.2 to 2) at LS and 0.298 (-2.3 to 3.2) at FN region. FN-BMD had a negative correlation with age and a positive correlation with weight and calcium, whereas LS-BMD had a negative correlation with age and serum alkaline phosphate. There was no correlation between BMD and liver disease-related parameters, such as CHB status, HBeAg, serum aminotransferases and antiviral therapy.

Parameters	Values
Age (mean ± SD)	47.5 ± 12.9 years
Male	72.2%
BMI (mean ± SD)	24.02 ± 4.01 kg/m ²
Comorbidities	Hypertension 26% / dyslipidemia 17% / Diabetes 9%
Cigarette smoking	5.6%
Moderate alcohol consumption	7.4%
Hepatitis B status	Active disease 74% / inactive carrier 26%
HBeAg status	Positive 20% / negative 80%
On oral antiviral agent(s)	66.7%

Conclusion: There was a trend toward reduced BMD, particularly in the trabecular bone, in CHB patients without cirrhosis when compared to normal population. Osteopenia and osteoporosis are common and were seen in half of CHB patients.

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Keywords: None

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