

中文題目：慢性 C 型肝炎病毒感染與骨質密度之相關性

英文題目：Association between Chronic Hepatitis C Virus Infection and Bone Mineral Density

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Background: Whether chronic hepatitis C virus (HCV) infection is a risk factor for the development of bone disease has long been controversial. For this reason, we conducted a thorough investigation of bone turnover markers and bone mineral density (BMD) in a homogenous cohort of patients with non-cirrhotic chronic HCV infection.

Materials and Methods: Chronic HCV-infected participants (n = 69) were recruited into a prospective cohort study and underwent dual-energy X-ray absorptiometry for determination of BMD. Fibrosis staging was evaluated according to the non-invasive index FIB-4. T-scores at the femoral neck and lumbar spine were used as the primary outcome variables to assess the association between degree of liver fibrosis and BMD. Osteoporosis was defined as a T-score ≤ -2.5 , and osteopenia as a T-score between -1.0 and -2.5.

Results: The population was 41% male with a mean age of 53.6 years. The mean BMD, Z-score, and T-score values of lumbar spine in chronic hepatitis C (CHC) patients were significantly lower than those in healthy controls ($p < 0.001$). The rate of osteoporosis for CHC patients between 45 and 54 years was significantly higher than that of the control group ($p = 0.011$). Bone alkaline phosphatase and C-terminal cross-linking telopeptide of type I collagen levels were also significantly higher in the reduced BMD population. Patients with more advanced liver fibrosis had significantly lower BMD (Table).

Conclusion: Reduced BMD is common in this population of chronic HCV-infected patients, by increased bone turnover in the osteodystrophy pathogenesis, probably associated with liver disease severity.