Summary

Chronic liver disease is associated with a broad spectrum of bone diseases; the most common type of hepatic osteodystrophy is osteoporosis. This changes result from increase in bone resorption exceeds bone formation, or decreased bone formation is present together with normal bone destruction, then in advanced cases, bone mass will decrease and the risk of fracture will increase.

So, this study was planned to assess BMD and bone turnover markers in non-cirrhotic patients with chronic HCV infection. Thirty patients with CLD due to chronic HCV were selected with 30 normal subjects, matched as regards age and sex, were included in the study as the control group. The study was conducted through-out the period from January 2009 to January 2010. All studied groups were subjected to the following: full history taking, clinical examination, investigations include: liver profile ALT , AST , S. bilirubin, S. albumin, PT and alkaline phosphatase, HCV Ab , HCV- RNA PCR (quantitative), S.calcium, S.phosphorus ,S. PTH , S. creatinine , abdominal ultrasonography , DEXA bone scan at femur neck and lumbar vertebrae and lastly, liver biopsies were taken for cases group.

In this study, there is no statistically significant difference between cases and control as regard age, sex, BMI, physical activity, smoking and history of previous vertebral fractures. Within the studied group, there is no statistically significant correlation between age, BMI and smoking with BMD.

In this study, the incidence of loss in BMD (osteopenia and osteoporosis) in cases was 47% in left femur neck and 52.5%, in the lumbar spine, which shows statistically significant difference in comparison with control group.

This study also shows that S. calcium, S. phosphorus, S. albumin, S.alkaline phosphatase, S. creatinine and PT dose not correlate with BMD ($p => 0.05$). While S. PTH showed higher levels than normal with significant negative correlation with BMD ($p=<0.05$**).**

In this study, there is statistically significant negative correlation between METAVIR fibrosis stages and necroinflammatory grades in liver biopsy and BMD.

But, on the other hand there is no statistically significant correlation between hepatitis C viral load and BMD.