

# INTRODUCTION

Bone manifestations are well known extra-hepatic complications of chronic liver disease (CLD) (*Rouillard and Lane, 2001*).

Osteodystrophy, including osteoporosis and osteomalacia, represents an important and frequent complication especially in advanced CLD, and hence the name "hepatic osteodystrophy" (*Ezzat et al., 2007*). It could be a debilitating disease causing chronic pain, fractures & deformities with subsequent inability to participate in normal daily activities, social withdrawal and even depression (*Greene, 2001*).

High incidence of hepatic osteodystrophy is being observed mainly in advanced cirrhosis, cholestasis and alcoholic liver disease (*Schiefke et al., 2005*).

The exact pathogenesis of bone metabolism abnormalities in CLD is debatable, and it is likely that multiple factors are operating simultaneously leading to bone turnover and/or remodeling imbalance (*Wariahgli et al., 2009*).

Most studies of bone disease were performed in patients with cirrhosis and little is known about the occurrence of bone disease in non cirrhotic patients with chronic hepatitis C (*Hofmann et al., 2008*). So the present study was planned to assess bone mineral density (BMD) using dual energy x-ray absorptiometry (DEXA) technique and serum bone turnover markers (namely, Ca, P and PTH) in non cirrhotic patients with chronic HCV infection.