

INTRODUCRION

More than 170 million people worldwide are chronically infected with the hepatitis C virus (HCV), which is responsible for over 1 million deaths resulting from cirrhosis and liver cancers.

Patients with end-stage renal disease (ESRD) are at increased risk for acquiring HCV infection. The role of HCV in the course, morbidity, and mortality of renal disease is often not adequately considered.

Patients on HD have a significantly higher annual incidence of hepatitis C virus (HCV) infection, depending on the country.

The prevalence of HCV infection varies greatly, from less than 5% to nearly 60% according to different areas of the world.

Egyptian HD patients have almost 55% prevalence of HCV infection.

AIM OF THE WORK

To study the impact of hepatitis C virus on metabolic bone disease in hemodialysis patients.

And its impact on bone histology in HCV +ve vs HCV -ve HD patients.

RESULTS:

Both G1, and G2 showed an increased prevalence to hyperparathyroid bone disease (60% and 56.7%) respectively. While, the G3: HCVAb positive serology with stigmata of chronic liver disease, showed a higher prevalence to low turnover uremic osteodystrophy or adynamic bone disease (ABD).

METHODS

Patients and Methods

This study was done on 90 stable hemodialysis patients, in Ain Shams University hospital.

Patients were divided in to 3 groups:

G1: 30 patients with HCV Antibody negative serology

G2: 30 patients with HCV Antibody positive serology with no stigmata of chronic liver disease

G3: 30 patients with HCV Antibody positive serology with stigmata of chronic liver disease.

Bone biopsy was performed on selected patients (21),

Patients who accepted to do biopsy.

patients who were indicated clinically according to the KDOQI guidelines.

Bone biopsies were taken for 21 patients ,

9 patients in G1,

7 patients in G2, and

5 patients in G3.



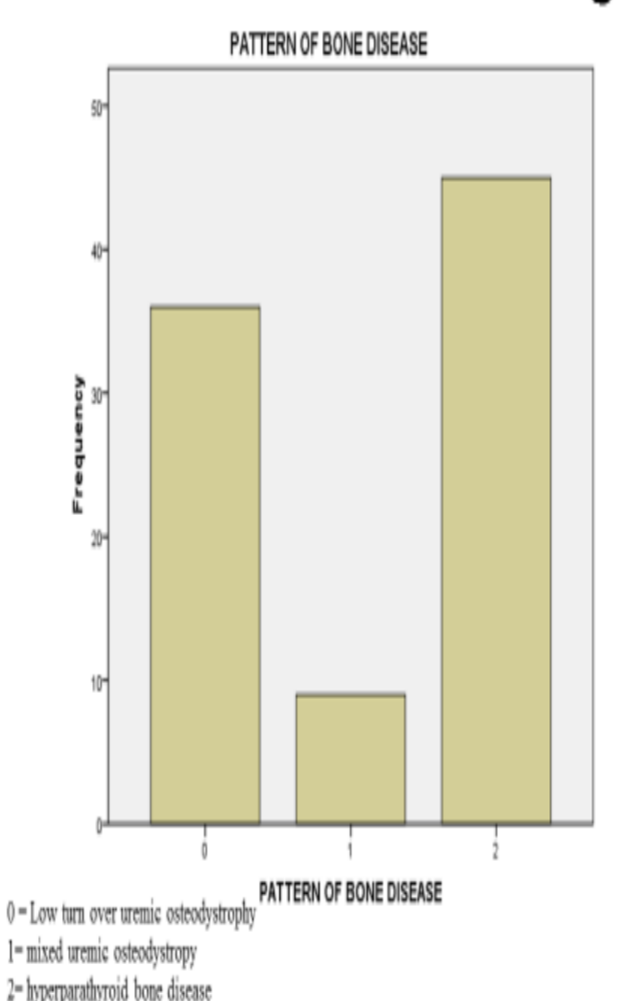
A Bard® Ostycut® disposable needle (14 gx 12.5 cm) was used, after double tetracycline labeling. Samples taken were examined by light microscopy and ultraviolet light.

RESULTS

Comparison between patterns of bone disease in all studied groups

PATTERN OF BONE DISEASE	Frequency
Low turnover uremic osteodystrophy(0)	40%
Mixed uremic osteodystrophy(1)	10 %
Hyperparathyroid bone disease(2)	50%
Total	100%

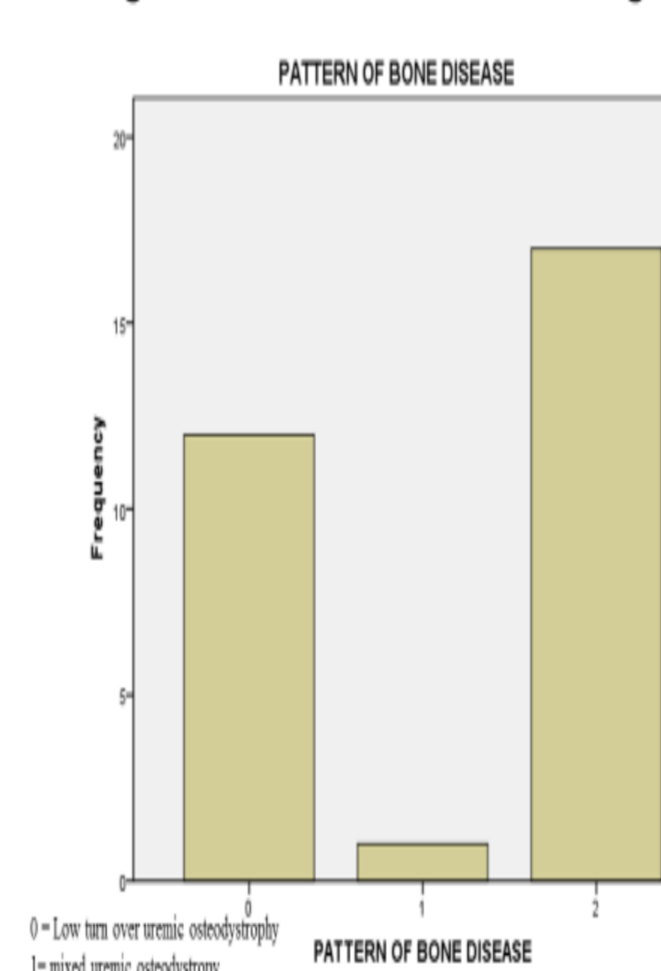
Comparison between patterns of bone disease in all studied groups



G1: Comparison between patterns of bone disease in the HCV Ab negative group.

PATTERN OF BONE DISEASE	Frequency
Low turnover uremic osteodystrophy(0)	23.3%
Mixed uremic osteodystrophy(1)	16.7%
Hyperparathyroid bone disease(2)	60%
Total	100%

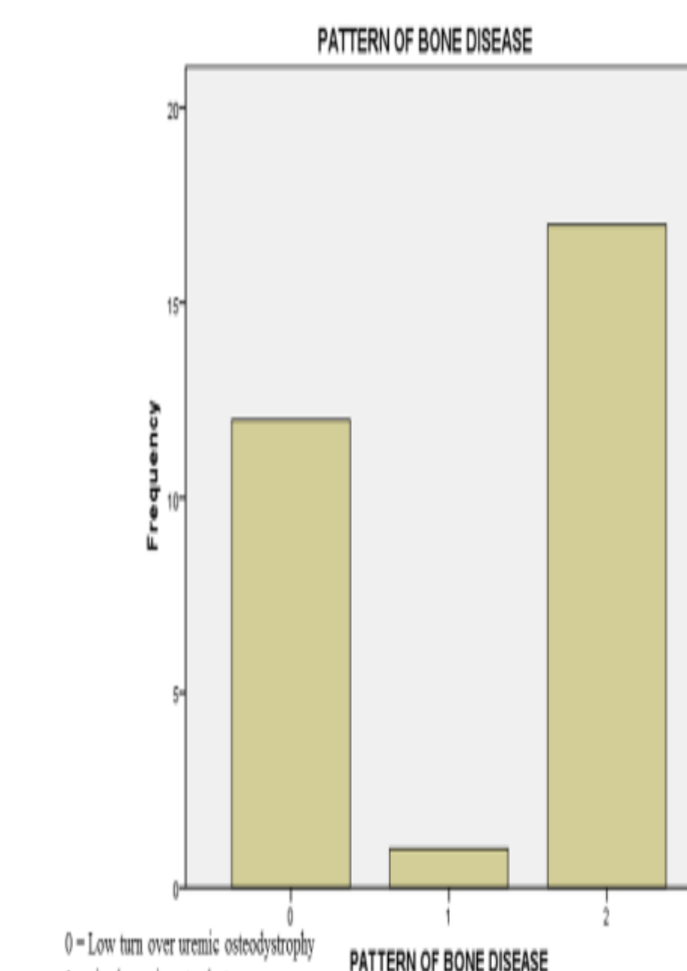
G1: Comparison between patterns of bone disease in the HCV Ab negative with no stigmata of chronic liver disease group



G2: Comparison between patterns of bone disease in the HCV positive with no stigmata of chronic liver disease group

PATTERN OF BONE DISEASE	Frequency
Low turnover uremic osteodystrophy(0)	40%
Mixed uremic osteodystrophy(1)	3.3%
Hyperparathyroid bone disease(2)	56.7%
Total	100%

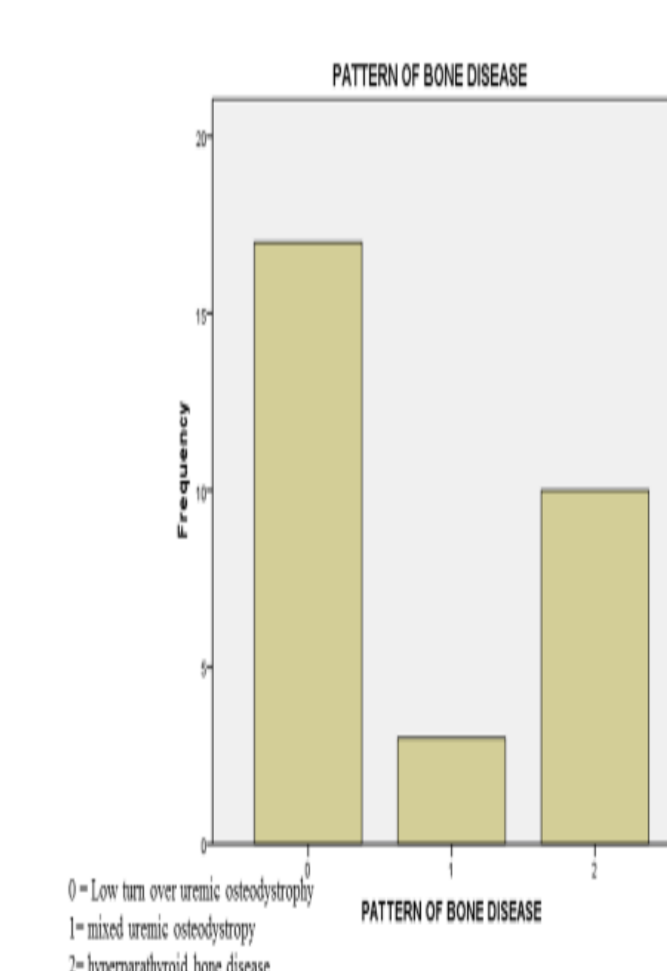
G2: Comparison between patterns of bone disease in the HCVAb positive with no stigmata of chronic liver disease group



G3: Comparison between patterns of bone disease in the HCV Ab positive , with stigmata of chronic liver disease group

PATTERN OF BONE DISEASE	Frequency
Low turnover uremic osteodystrophy(0)	56.7%
Mixed uremic osteodystrophy(1)	10%
Hyperparathyroid bone disease(2)	33.3%
Total	100%

G3: Comparison between patterns of bone disease in the HCVAb positive with stigmata of chronic liver disease group



CONCLUSIONS

Possibly, these findings demonstrates that hepatitis C viremia alone, may not have a specific influence or impact on the pattern of bone disease in hemodialysis patients.

On the other hand, patients with manifested chronic liver disease, showed a different pattern of bone disease.