

Clinical utilities of quantitative ultrasound in Mineral bone disease associated with Chronic Kidney Disease

Dr.Saravanan Thangavelu

Head of the Department of General Medicine, India

INTRODUCTION: Mineral bone disease (MBD) remains as a high threat for pathological fractures in maintenance hemodialysis (MHD) population. The assessment of bone mineral density (BMD) is done by Dual Xray Absorptiometry (DEXA) scan, however there are certain challenges for its usage like availability, high cost etc. Recently Quantitative Ultrasound method has been introduced to assess the peripheral BMD. The purpose of this study is to describe the utilization of this densitometer for assessment of BMD in MHD patients.

METHODS: In this multicentric, cross sectional study, BMD of MHD patients was measured using Ultrasound bone Densitometer (cm-200 light, Furuno Electric Co. Ltd.). The BMD was captured at the heel region and T-scores were recorded and analyzed in MS excel 2016

RESULTS: Over a period of three months, 150 patients were screened. Average age of the patients observed was 44.85 ± 16.73 years. 56.6% patients were male. The mean T-score observed was -1.15 ± 1.09 . Osteopenia was seen in 46.6% patients while 10% patients were osteoporotic. The prevalence of osteoporosis among males and females was 8.23% and 12.3% respectively.

CONCLUSION: Ultrasound based noninvasive estimation of bone mineral density can be considered as a screening option for CKD-MBD with an advantage of ease of measurement and portability. However, this method needs more studies with wider population to compare with bone biopsy for recommendation of use. Based on the results obtained from this study, osteopenia is quite prevalent in MHD patients and screening of MHD patients should be done on a regular basis as osteopenia itself is considered a very serious risk factor for the development of osteoporosis.

Biography

Dr. Thangavelu Hospital has been started by Dr. K. Thangavelu and it was successfully running since 1985, Dr.Thangavelu Hospital extended his Wings and transformed into a Speciality Hospital, Abirami Kidney Care, Erode.

drsaravanan.t@gmail.com

Abstract received :December 20, 2023 | Abstract accepted :December 22, 2023 | Abstract published : 26-02-2024