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AB 2018/OP 14**Association Of Bone Mineral Density And Content (Bmd/bmc) With Total Body Fat And Lean Masses Among Patients With Chronic Kidney Disease Attending Teaching Hospital, Karapitiya**

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Introduction and objective

Interaction between three major body compartments; lean, fat and bone masses is essential for the maintenance of optimum bodily functions. This interaction is disturbed by many factors such as age, prevalent disease and drug usage. It is important to understand the interaction of body compartment in major diseases such as chronic kidney disease (CKD) to optimize disease outcome.

Methods

Twenty two consecutive patients (16 males) with advanced CKD awaiting kidney transplant at Teaching Hospital, Karapitiya underwent DEXA scan to assess body composition. They were scanned adhering to the manufacturer's guidelines and the standard analytical software was used for the analysis.

Results

Mean (SD) age of the patients were 48(9.6) years. Total body lean mass (TBLM) showed positive correlations with total body bone mineral density (TBBMD) ($r = 0.43$, $p = 0.059$), total body bone mineral content (TBBMC) ($r = 0.66$, $p = 0.002$), spine BMD ($r = 0.42$, $p = 0.068$), femoral neck BMD ($r = 0.39$, $p = 0.090$) and total hip BMD ($r = 0.46$, $p = 0.041$), independent of age. No significant correlations were observed between total body fat mass (TBFM) and either total or regional BMDs.

Conclusion

TBLM is the best predictor of BMC and regional BMDs in patients with advanced CKD and this knowledge can be used in health promotion programs to improve bone health of these patients.