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Bone Mineral Content as a Risk Factor for Mortality in Incident Peritoneal Dialysis Patients

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Background: Body composition analysis has received growing recognition as an important method for the predictor of mortality in peritoneal dialysis patients. This study was performed to determine the clinical relevance of total bone mineral content in peritoneal dialysis patients.

Methods: This retrospective cohort study included 566 peritoneal dialysis patients. Total bone mineral contents were measured using a dual-energy X-ray absorptiometry apparatus. Patients were divided into three groups by tertiles of initial total bone mineral content for both sexes.

Results: In males, the sensitivity and specificity for the prediction of mortality were 73.2% and 51.5%, respectively. In females, those for the prediction of mortality were 66.3% and 62.9%, respectively. In both sexes, univariate analysis showed that initial low tertile was associated with mortality in peritoneal dialysis patients. Multivariate analysis adjusted for age, davies risk index, serum albumin, total fat mass also showed an association between low tertile and mortality.

Conclusion: Total bone mineral content is associated with mortality in CAPD patients. Therefore, this may be a novel marker that is useful for the prediction of the mortality in peritoneal dialysis patients.

Keywords: bone mineral content, mortality, peritoneal dialysis