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152 THE RELATIONSHIP BETWEEN 25(OH) VITAMIN D AND BONE MINERAL DENSITY (BMD) IN PATIENTS 65 YEARS AND OLDER WITH PRIOR FRAGILITY FRACTURES

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Introduction: 25(OH) vitamin D [25(OH) D] levels are known to influence skeletal health as well as muscle function. Some studies suggest a positive association between 25(OH) D levels and BMD at various skeletal sites in men but not in women. These findings were mostly observed in younger (less than 50 year old) cohorts. Evidence for this association in older patients with prior fragility fractures is lacking. Aim: To assess the correlation of 25(OH) D levels with T-scores at the neck of femur, hip and spine in patients 65 years and older with prior fragility fractures and the effect of gender on the correlation.
Methods: A retrospective, cross-sectional analysis of patients 65 and older with previous fragility fractures in patients attending a fracture prevention service. Data was extracted from the electronic records. SPSS 26 statistical software was used for statistical analysis. Pearson correlation coefficient was used to calculate correlation and regression coefficient for gender.
Results: 151 patients were included; 26 males and 126 females. Mean age was 76.2 and 74.1 years respectively. In the males there was good positive, statistically significant correlation between the 25(OH) D and T-scores at the neck of femur ($r = 0.415$; $p < 0.05$) and hip ($r = 0.413$; $p < 0.05$), but correlation with T-score of the spine was not statistically significant ($r = 0.349$; $p = 0.103$). In the females there was no statistically significant correlation between 25(OH) D and T-scores at the neck of femur, hip or spine ($r = 0.163$; $p = 0.077$), ($r = 0.096$; $p = 0.299$) and ($r = 0.114$; $p = 0.217$) respectively.
Conclusion: In males, 65 years and older, with prior fragility fracture, there is a positive significant correlation between 25(OH) D and BMD at the neck of femur and hip whereas there is no significant correlation in females.