

9th International Conference on

Dialysis and Renal Care

August 18-19, 2016 London, UK

Bone mineral disorders and mortality in dialysis patients

Navjit Kaur

Monilek Hospital & Research Centre, India

Numerous studies have demonstrated that Chronic Kidney Disease - Mineral Bone Disorder (CKD-MBD) is related to cardiovascular events and hospitalization. This prospective study was conducted for CKD-MBD in end stage kidney disease (ESRD) patients in a dialysis center to quantify their impact on mortality. Study considered the enrollment of 70 patients over 18 years old. Investigators reviewed biochemical markers, and appraised vascular calcifications with X-ray calculating the Adrago and Kaupilla scores. The mean age was 58.0 ± 14.9 year old and 62.0% were male. The principal cause of CKD was diabetes and nephroangiosclerosis (28.2 and 23.5% respectively). Approximately 81.7% of patients were on hemodialysis, with a median time from onset therapy of 41.6 months. About 54.7% had secondary hyperparathyroidism figure, with a mean intact parathyroid hormone level of 536 ± 481 pg/ml. The serum calcium and phosphorus level was 8.4 ± 0.8 mg/dl respectively. Fibroblast growth factor 23 (FGF23) values showed extensive variations with a mean of 166 ± 196 pg/dl, while fetuin A showed lower values of 0.5 ± 0.3 mg/dl. The Adrago and Kaupilla scores were reported to be 3.4 and 8.1, respectively. No association was observed between vascular calcification and FGF 23 or fetuin A. The follow-up time was three years. Around 27.5% of patients were transplanted, 34.8% continued on dialysis and 37.7% died during the follow-up observation period. The prime cause of mortality was cardiovascular (42.3%). Those who died demonstrated higher phosphate and iPTH level compared to live patients (6.1 ± 2.2 versus 5.2 ± 1.6 mg/dl and 808.7 ± 62.6 versus 481.1 ± 426.2 pg/dl, respectively). Additionally, patients who died showed lower values of fibroblast growth factor 23 and a greater tendency for vascular calcification evaluated by Adragao score in comparison to their counterparts (60.8 ± 86.9 versus 203.6 ± 210.7 pg/dl and 4.54 ± 2.96 versus 2.94 ± 3.19 , respectively). Multivariate analysis showed that the increase of one unit of the calcium-phosphorus result in an increase of 3% on the risk of death with statistical significance. The study results accentuated a high prevalence of secondary hyperparathyroidism, with correlation between serum phosphorus, PTH level and calcium-phosphorus product, and mortality. The decreased patient unveiled a tendency for lower level of FGF23 and major vascular calcification.

navjitmudgill87@gmail.com

Notes: