

Efficacy and safety of antiresorptive therapy In Ckd3-5d patients

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Abstract

Background: Changes in bone and mineral metabolism occur during the course of CKD. The prevalence of low bone mineral density (BMD) and osteoporosis increases with greater severity of chronic kidney disease (CKD). Low BMD predicts the fracture risk in the general population. Bisphosphonate therapy improves BMD and lowers the fracture risk in many populations. In this study, the effect of oral alendronate on BMD in patients with CKD 3-5D was evaluated.

Material and Methods: Eighty patients of CKD 3- 5D stage were divided into two equal groups, one who received 35 mg alendronate, taken once a week for 12 months compared with another group who did not receive alendronate. Lumbar spine, femur neck and total hip BMD were measured by dual energy X-ray absorptiometry at baseline and at 6 months. Parathyroid hormone, calcium, phosphorous and alkaline phosphatase levels were assayed at baseline and at 1, 3, 6 and 12 months.

Results: There was improvement in mean T score, Z score and BMD at level of lumbar spine, femur neck and total hip at 6 and 12 months in patients, who received oral alendronate compared to controls. This change in mean of T score, Z score and BMD was statistically significant between two groups at 6 and 12 month irrespective of CKD stage. The main side-effect in the alendronate group was occurrence of GI intolerance in five subjects.

Conclusions: Low-dose alendronate, administered for longer duration, appears to be well tolerated in CKD 3-5D patients. The BMD, T-scores and Z score declined in the placebo group over 12 months, while there was improvement in the treatment group, suggesting a bone-preserving effect of alendronate.

Biography:

Dr. Sudhir Mehta is a Nephrologist and he has an experience of 5 years in this field. He completed studies from Dayanand Medical College & Hospital

Speaker Publications:

1. "KDIGO 2017 Clinical Practice Guideline Update for the Diagnosis, Evaluation, Prevention, and Treatment of Chronic Kidney Disease–Mineral and Bone Disorder (CKD-MBD). Kidney Int"
2. "Ott SM. Therapy for patients with CKD and low mineral density. Nat Rev Nephrol."
3. "Miller PD, Roux C, Boonen S, Barton IP, Dunlap LE, Burgio DE. Safety and efficacy of risidronate in patients with age- related reduced renal function as estimated by the Cockcroft and Gault method: A pooled analysis of nine clinical trials"
4. "Jamal SA, Bauer DC, Ensrud KE, Cauley JA, Hochberg M, Ishani A, et al. Alendronate treatment in women with normal to severely impaired renal function: An analysis of the Fracture Intervention Trial".
5. "Miller PD, Jamal SA, Evenepoel P, Eastell R, Boonen S. Renal safety in patients treated with bisphosphonates for osteoporosis: a review. J Bone Miner Res"

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