

## **VITAMIN D ANALOGUES REDUCE PROTEINURIA IN KIDNEY TRANSPLANT (KTx) PATIENTS**

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Recent studies show that vitamin D analogues (VDA) may reduce proteinuria in CKD patients. We decided to assess the effect of 3 VDAs on proteinuria in kidney KTx with renal dysfunction in our institution.

Methods: Out of 300 charts we collected information on 72 outpatients (24 each on Calcitriol, Doxercalciferol and Paricalcitol respectively). Patients with normal renal function, unstable renal functions and acute rejection were excluded. Information on demographics, lab data, medications, comorbidities, and eGFR by MDRD were obtained.

Urine protein creatinine ratio before initiation of VDA and at least 2 months after initiation were recorded. Baseline characteristics were stratified under different VDA using Chi-square test. Paired t-test was used to compare the reduction in proteinuria across VDA groups. Final analysis was performed using multi-way ANOVA.

Result: There was an overall reduction in proteinuria after initiation of VDA across all three groups (1234 before vs. 880 after;  $p < 0.001$ ). In an unadjusted model, therapy with the Paricalcitol (mean -631; SD855) was associated with significant ( $p = 0.007$ ) reduction of proteinuria compared to Doxercalciferol (-270; SD618) and Calcitriol (-158; SD 683). Renin Angiotensin system (RAS) blockade was associated with more reduction in proteinuria (Mean -377 vs. -341;  $p = 0.034$ ).

On adjusting for confounders in a multivariate model, Paricalcitol therapy continued to be associated with higher reduction in proteinuria compared to Doxercalciferol and Calcitriol ( $p = 0.033$ ). Lower baseline GFR ( $p = 0.002$ ) was associated with higher reduction in proteinuria. PTH suppression ( $p = 0.02$ ) was associated with higher reduction of proteinuria. Females had more reduction in proteinuria than males (Mean -403 vs. -331;  $p = 0.007$ ).

Conclusion: Activated VDT is associated with reduction in proteinuria in KTx patients with renal dysfunction. In addition suppression of PTH, female gender and RAS blockade in conjunction with activated Vitamin D therapy especially Paricalcitol, may be associated with higher reduction of proteinuria. A larger study is needed to confirm the finding