Nephrology Dialysis Transplantation 31 (Supplement 1): i503–i513, 2016
doi:10.1093/ndt/gfw195.20

PERITONEAL DIALYSIS - 2

MP504 THE EFFECT OF PARICALCITOL ON DIALYSATE PROTEIN LOSS IN PERITONEAL DIALYSIS PATIENTS

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Introduction and Aims: Ever since peritoneal dialysis (PD) has been used in the treatment of chronic kidney disease (CKD), high peritoneal protein loss has been observed on each PD exchange. In adult patients, the loss has been estimated at 6 to 13 g daily. Paricalcitol, a selective activator of vitamin D receptors (VDR), is successfully used as a treatment of hyperparathyroidism secondary to CKD. In addition, it has been proposed for reducing proteinuria in patients with CKD. Nonetheless, little is known about its effect on peritoneal protein loss (PPL) in patients on PD, namely after the identification of VDR on the peritoneal membrane. The aim of this study was to examine the effect of paricalcitol on PPL in PD patients.
Methods: In a cross-sectional study we included patients stable on PD for a minimum period of three months. The patients were divided into two groups. Group 1 (G1) was treated with paricalcitol at least for three months. Group 2 (G2) did not receive treatment with paricalcitol. Clinical and laboratory data were collected from all patients at the time of peritoneal protein loss analysis. In statistical analysis Student's t-test, Chi-square test and Linear Regression Model were used.
Results: Sixty PD patients (G1= 30 and G2= 30) were included in the study: 41 male, age 55±17 years, 16 patients with diabetes, in 42 patients PD was the first renal replacement therapy, the mean Charlson Comorbidity Index (CCI) was 5±3 and creatinine dialysate-to-plasma ratio was 0.7±0.1, without statistically significant differences between the two groups.The mean time on PD was 18.4 months for G1 and 22.1 months for G2 and the difference was statistically non-significant (p=0.46). We found a PPL of 5.57±1.81 g per 24 hours in G1 and 6.99±1.86 g per 24h in G2 (p=0.004). The mean time of paricalcitol therapy was 8.8±7.5 months. There were no differences between the groups regarding diabetes, type of transporter, PD modality, residual renal function, number of peritonitis, reactive C protein (RCP) and medication with native vitamin D or angiotensin-converting enzyme inhibitors (ACEIs)/angiotensin II receptor blockers (ARBs). In a linear regression analysis we found that diabetes (p= 0.003) and time of therapy with paricalcitol (p= 0.038) were independent predictor factors for PPL; we did not find significance regarding PD modality, type of transporter, RCP and time of therapy with ACEIs/ARBs.
Conclusions: In this study, treatment with paricalcitol was independently associated with lower peritoneal protein loss in chronic peritoneal dialysis patients. Prospective controlled studies, with greater number of patients, comparing paricalcitol with placebo are needed to confirm the effect of paricalcitol on peritoneal protein loss.