

The overview of CKD MBD treatment in the outpatient dialysis clinic Nefrodial Naklo

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BACKGROUND

To evaluate the treatment of CKD MBD and outcomes in chronic hemodialysis (HD) patients in the outpatient dialysis center.

METHODS

In this observational study 40 prevalent HD patients were included. All underwent ultrasound (US) examination of carotid arteries and heart with evaluation of calcination in common carotid artery, carotid bulb, internal carotid artery and mitral valve. Age, HD vintage, cumulative weekly dosage of phosphate binders, active vitamin D analogs, cinacalcet and biochemical parameters (Ca, P, PTH, AP, Cax P) were collected from the month of US examination in year 2014 until the end of 2019.



RESULTS

During the observational period of 72 months we analyzed data of 24 (60%) males and 16 (40%) females, with mean age of $69,72 \pm 11,8$ years and mean hemodialysis vintage $10,35 \pm 5,4$ years. The average PTH was $293,6 \pm 174,4$ ng/l, CaxP product $3,37 \pm 0,66$ mmol/l² and level of 25 dihydroxycholecalciferol $21,2 \pm 11,6$ nmol/l. Vascular calcifications were detected in 39 patients (72.5%) and mitral calcifications in 25 (62.5%) patients. Overall 21 patients (52.5%) died, among them 12 deaths were attributed to cardiovascular reason. After a median follow-up of 72 months, the risk ratio for death in the group with mitral calcifications was 4.03; 95% confidence interval 3.2 to 4.8.; $p=0.04$, the risk rate for death in the group with vascular calcifications was not statistically significant ($p=0.64$). Average cumulative weekly dosage of CaCO_3 was $1,05 \pm 1,3$ gr and calcitriol $0,3 \pm 0,5$ mcg. Calcium containing therapy, cholecalciferol as well as calcitriol were not associated with the presence of vascular or mitral calcifications, however patients treated with paricalcitol tend to have less calcifications of carotid arteries and mitral valve. Longer HD vintage and age were independent risk factors for vascular calcifications. In the observed period the patients were on average hospitalized for 56 days (4,2 - times per year).

CONCLUSIONS

This overview of CKD MBD management in our center revealed that most of the patients have PTH and CaxP within the recommended range, however we observed low levels of 25 dihydroxycholecalciferol. Majority of patients have vascular and/or mitral calcifications not influenced with calcium containing therapy, albeit associated with the higher risk of death.

