**PUB087**

The Expression Characteristics and Correlation Analysis of Bone Mineral Density and Bone Turnover Biomarkers in CKD Patients

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**Background:** Chronic kidney disease-mineral and bone disorder (CKD-MBD) is a common complication of CKD. It will cause renal osteopathy and vascular calcification.

**Methods:** The patients were divided into four groups: CKD1-2 stage, CKD3-5ND stage, CKD5D stage and calciphylaxis. We analyzed the differences and variation tendency among groups. Logistic regression analysis showed the protect and risk factors for osteoporosis. Finally, we drew the ROC curves to explore if the BTMs can predict the osteoporosis.

**Results:** 326 CKD patients was included. With the progression of the CKD, bone mineral density (BMD) decreased and bone turnover biomarkers (BTMs) became disordered. Calciphylaxis patients were more serious than general dialysis patients. Logistic regression analysis showed that male (OR=0.558, OR=0.554) and BMI (OR=0.890, OR=0.911) were the protect factors of both left total hip and lumbar bone loss. logPTH (OR=5.140) was risk factor of left total hip bone loss. ALP (OR=1.008) was risk factor for lumbar bone loss. The AUC of PTH and ALP were the highest one in the ROC curve of left total hip and lumbar respectively.

**Conclusions:** When the GFR decreased, BMD and BTMs became abnormal gradually. The BMD of calciphylaxis patients were lower than other patients. PTH and ALP were risk factors and best predictors for osteoporosis in CKD patients.

**PUB088**

Prevalence of Secondary/Tertiary Hyperparathyroidism Among Patients With CKD Stage 5 on Hemodialysis at the Victoriam Luna Medical Center

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**Background:** A common complication of renal failure is Secondary Hyperparathyroidism (SHPT) which if left untreated, can lead to Tertiary Hyperparathyroidism (THPT). Baseline prevalence data is highly required to reduce the risk of complications since both of these can lead to significant morbidity, mortality and additional healthcare cost.

**Methods:** Medical Record of patients with CKD stage 5 on hemodialysis in Victoriam Luna Medical Center were reviewed. Excluded were those who underwent Hemodialysis due to Acute Kidney Injury, those with history of thyroid or parathyroid surgery, those with hypoparathyroidism or primary hyperparathyroidism, active pulmonary tuberculosis, active malignancy and vitamin D disorder. Data collected were age, sex, presence of comorbidities, etiology of CKD, duration and frequency of Hemodialysis, maintenance medication and Laboratory parameters such as intact PTH (iPTH), serum phosphorus, ionized calcium. All data were statistically analyzed.

**Results:** 101 patients were included in the study. 42.5% (43 out of 101) of them have SHPT, while 4.95% (5 out of 101) have THPT. Among those with SHPT, majority were female (74.4%), have single comorbidity (69.7%), and with Chronic Glomerulonephritis (34.5%) as the most common etiology of CKD. On the other hand, all patients with THPT were male, majority (80%) have single comorbidity, but with Hyperensive Nephrosclerosis (40%) as the most common etiology of CKD. In patients with elevated iPTH, majority (71.4%) have iPTH of <300pg/mL, while 16.6% have iPTH level between 300-500pg/mL, and 11.9% have iPTH level of >500pg/mL. Majority of patients with iPTH level of <300pg/mL and between 300-500pg/L were on 2x a week schedule of hemodialysis as compared 3x a week schedule of hemodialysis in patients with iPTH level of >500pg/mL. Based on data collected, increasing level of iPTH is associated with increasing trend of serum phosphorus and ionized calcium.

**Conclusions:** Factors such as duration and frequency of hemodialysis and medications taken may influence level of iPTH. iPTH level is congruent with level of serum phosphorus and serum calcium, indicating possible progression of the disease which may be due to inadequacy of calcium, Vitamin D, Phosphate binder supplement and hemodialysis frequency schedule.

**PUB089**

Severe Hyperparathyroidism Associated With Increased Functional and Mobility Impairment in Ecuadorian Hemodialysis Patients With Prolonged Time in Hemodialysis

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**Background:** Secondary hyperparathyroidism (SH) is associated with increased morbidity and mortality in hemodialysis (HD) patients which worsens with long HD stay. Vitamin D, phosphate-binders and calcimimetics are used, however their high cost make them unavailable for some Latin-American patients. Few is known about SH behavior in Ecuadorian patients with prolonged HD stay and lack of IV vitamin D agonists/calcimimetics. The aim of the study was to describe SH behavior in one Ecuadorian cohort of HD patients and the effect mobility and functional status as the relation with time in HD.

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**Key:** TH - Thursday; FR - Friday; SA - Saturday; OR - Oral; PO - Poster; PUB - Publication Only
Underline represents presenting author.