

#1938 - The relationship between fibroblast growth factor-23 and mineral factors in hemodialysis patients: A multicenter study

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Body

Abstract

Fibroblast growth factor-23 (FGF23) is a circulating bone-derived phosphaturic hormone. Complex disorders in calcium, phosphate, and vitamin D homeostasis occur in patients with chronic kidney disease. This study aims to investigate the association of FGF23 with mineral factors, PTH and 25-hydroxyvitamin D among hemodialysis patients. This cross-sectional multicenter study was performed on 135 patients aged 18 years and over with End-stage renal disease treated with hemodialysis maintenance. FGF-23, phosphorus, Ca, Mg, PTH, 25-hydroxyvitamin D, Uric Acid, Na and K were measured from each patient's blood sample while fasting. We used univariate and multivariate linear regression. The mean age of patients was 56.45 ± 13.64 years. The mean and median FGF23 concentration in patients was 855.07 ± 43.33 and 762.6 (IQR=456.6-1430.3) pg/mL. Different variables did not show any significant difference between two sexes. After adjustment for age, sex, dialysis time, uric acid, Na, K and kt/V, FGF23 had a linear association with 25-hydroxyvitamin D and each 10-unit (pg/mL) increase in FGF23 was significantly associated with 0.03 mg/mL increase in 25-hydroxyvitamin D ($P=0.04$). In addition, other variables

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did not show any significant association with FGF23. According to the results, FGF23 had a linear association with vitamin D and increase in FGF23 was significantly associated with increase in vitamin D. Also, there was no significant association between mineral factors, PTH and FGF23.

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