

25-hydroxyvitamin D Deficiency and Predictive Factors in Patients with Diabetic Nephropathy in Type 2 Diabetes Mellitus

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Diabetes mellitus is a metabolic disease that is characterized by chronic hyperglycemia. Type 2 diabetes is a global health problem and leading to many dangerous complications. Diabetic nephropathy is a significant microvascular complication resulting from diabetes mellitus that is affecting up to 50% of patients with end stage renal disease. Vitamin D deficiency may occur due to many different factors and is associated with many serious diseases as diabetic nephropathy. To investigate the 25-hydroxyvitamin D deficiency and predictive factors in patients with diabetic nephropathy in type 2 diabetes mellitus. One hundred type 2 diabetic patients were divided into two groups according to Alb/creat ratio to diabetic patients with and without nephropathy and 50 non-diabetic controls. We measured the serum 25-hydroxyvitamin D levels in all the study populations. The mean serum level of 25 (OH) D was significantly decreased in patients with diabetic nephropathy (13.41 ± 4.99 ng/ml, $P=0.002$). There was a significant correlation with vitamin D deficiency and the patients residency and also a significant positive correlation with eGFR ($r = 0.317$, $P = 0.025$) and a significant negative correlation with Alb/creat Ratio ($r = -0.323$, $P = 0.022$). The significant best-fitting predictors of vitamin D deficiency were living in rural area (OR=4.030, $P<0.021$) and eGFR<60 (OR=5.412, $P<0.034$). In conclusion, vitamin D deficiency is prevalent in patients with diabetic nephropathy living in rural areas. Low eGFR<60, Alb/creat ratio more than 30 mg/24h and HbA1c>9 could be considered as predictive factors of vitamin D deficiency in these patients.