

Incidence of Vitamin D Deficiency in Patients with Type II Diabetes Mellitus and its Relation to the Severity of Retinopathy

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Objective: To evaluate the prevalence of vitamin D deficiency (VDD) in patients with type II diabetes mellitus (DM) and evaluate the relationship between deficiency of vitamin D and severity of diabetic retinopathy (DR).

Design: A Prospective Observational Study.

Setting: Ophthalmology Department, King Hamad University Hospital, Bahrain.

Method: Three hundred patients were included in the study. The inclusion criterion was patients with type II DM and the exclusion criterion was patients who were on vitamin D supplementation. DR was classified clinically into three groups: No Diabetic Retinopathy (NDR), Non-Proliferative Diabetic Retinopathy (NPDR) and Proliferative Diabetic Retinopathy (PDR). Level of vitamin D was classified according to serum 25-hydroxyvitamin D (25(OH)D) into three groups: normal, insufficient and deficient.

Result: Low level of serum 25(OH)D was commonly found in type II DM patients, with a prevalence of 92%. There was a significant decrease in 25(OH)D concentrations with the advanced stages of DR. Patients with PDR had significantly lower serum 25(OH)D concentrations compared to other groups.

Conclusion: VDD was commonly found in type II DM patients. Lower serum 25(OH)D levels were associated with more severe DR. In our study, all of the PDR patients had VDD and the lowest serum 25(OH)D levels (<20 ng/ml).