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Vitamin D deficiency and erectile dysfunction among men with type 2 diabetes

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The morbidity of men with diabetes and Erectile Dysfunction (ED) is becoming more increasingly recognized which has been taken to have association again with Vitamin D Deficiency (VDD). Thus, the aim of this nested case control study was to determine the association between vitamin D status and ED Bangladeshi adult men with type 2 diabetes (T2DM) which included 2860 patients (between 30 to 69 years). Among patients with normal vitamin D level, were categorized as control and those who had VDD, were grouped as the case. The study was conducted in diabetes care centers in Bangladesh. Socio-demographic, personal and family information were collected by face to face interview and disease-specific data were recorded from the patient's record book. Body weight, height, waist circumference, hip circumference and blood pressure were also recorded. Fasting blood samples were collected and serum levels of vitamin D, glucose and free testosterone were measured. The diabetes patients with ED has more severe VDD [(25 OH) D<10 ng/mL] than the controls (12% and 41%, respectively). The multivariate logistic regression analysis found that VDD [25(OH)D<20 ng/mL] to be associated with ED [OR 6.9 (95% CI: 2.9–15.8, p<0.001)]. Vitamin D level has positive linear association with glycemic control [OR 2.3 (95% CI: 1.7-5.9, p 0.003)] and with ED [3.6 (95% CI: 2.2–7.7, p 0.001)]. VDD is found to be an independent risk factor of ED in men with T2DM and severity of ED is linearly associated with the degree of deficiency of vitamin D.

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