Vitamin D and Diabetes Mellitus Type 2

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Introduction

- Vitamin D deficiency has been observed in diabetes mellitus type 2 patients

- It has been found to be related to poor glycemic control in diabetes mellitus type 2 patients as well as in patients with gestational diabetes

- The administration of vitamin D in diabetes mellitus type 2 patients with vitamin D deficiency has been found to have conflicting results on blood glucose control
The aim was to assess the effect of vitamin D administration in diabetes mellitus type 2 patients with vitamin D deficiency on blood glucose control.
Methods

- In a group of 20 diabetes mellitus type 2 patients with vitamin D deficiency vitamin D was administered along with oral hypoglycemic agents

- 25(OH)D$_3$ and glycosylated hemoglobin levels were measured at the beginning of the study and 3 months later

- Patients were on treatment with oral hypoglycemic agents

- Cholecalciferol was administered orally at a dose of 1200 iu daily for a period of 3 months
Results

- At the beginning of the study diabetes mellitus type 2 patients were found to have vitamin D deficiency, $25(OH)D_3$ levels being $18.6 \pm 0.86$ ng/ml (mean ± SEM), glycosylated hemoglobin levels being $7.1 \pm 0.15\%$

- After the administration of cholecalciferol for a period of 3 months glycosylated hemoglobin levels decreased to $6.56 \pm 0.19\%$ (p<0.05, Student’s t test)
Conclusions

- Vitamin D supplementation in diabetes mellitus type 2 patients on oral hypoglycemic agents may contribute to better blood glucose control.

- These results are in accordance with the known effect of vitamin D on insulin secretion as well as on insulin sensitivity.

- However, as the study involved diabetes mellitus type 2 patients the effect of better adherence to dietary restrictions or improved compliance to the oral hypoglycemic treatment on blood glucose control cannot be excluded.