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**

Aim

- **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 ± 0.86 ng/ml (mean ± SEM), glycosylated hemoglobin levels being 7.1 ± 0.15%

- After the administration of cholecalciferol for a period of 3 months glycosylated hemoglobin levels decreased to 6.56 ± 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**