**Prevalence and Severity of Vitamin D Deficiency in Hypothyroidism- A Case Control Study**

Dr Hetal Pandya, Dr Dhruv Kotecha, Dr Rohit Chordiya

|  |  |
| --- | --- |
| Abstract:  | Vitamin D deficiency is widely prevalent in tropics and subtropical areas. Hypothyroidism is also emerging as second most common endocrine epidemic in India next to diabetes mellitus. It has been observed that Vitamin D levels are significantly low in hypothyroid patients as compared to normal healthy individuals, which is one of the easily treatable conditions. A case control study was carried out in Department of General Medicine, SBKS Medical Institute and research centre, Sumandeep Vidhyapeeth University, Piparia, Vadodara. Total 150 participants were included and divided in two groups: 75 were hypothyroid patients (Group A: Cases) and 75 were normal healthy individuals (Group B: Controls). Detailed history, clinical examination was done in all participants. Thyroid function tests (S.TSH, Free T3, Free T4) and Vitamin D levels were measured in all patients. Appropriate statistical tests were used for result analysis. The prevalence of Vitamin D deficiency was 15.99% in normal healthy population while 75.99 % of hypothyroid patients were Vitamin D deficient. The mean value of Vitamin D level in hypothyroid patients was 23.69 + 6.83 whereas that in control group was 34.31 + 6.77 (p=<0.001). Statistically significant association was found between severity of hypothyroidism and severity of vitamin D deficiency ( p value =0.007, CI=95%). Negative correlation was observed between serum TSH level and Vitamin D level in Hypothyroid patients (r=-0.393, p=<0.001). However, no correlation was found between age, gender and duration of hypothyroidism and vitamin D levels. Vitamin D Deficiency is having very high prevalence in hypothyroid patients as compared to normal healthy population. All patients of Hypothyroidism should be screened for vitamin D deficiency and those found to be having low levels of Vitamin D, should be given Vitamin D supplements, as Vitamin D deficiency might be related to control of thyroid functions in thyroid disorders.  |
| Keyword:  | Vitamin D, Hypothyroidism  |
| DOI:  | <https://doi.org/10.31838/ijpr/2020.12.01.257> |