

TITLE

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OBJECTIVES

By the definition of vitamin D receptors in many tissues, many functions of vitamin D other than calcium homeostasis and bone metabolism were shown. A role for vitamin D is suggested in the pathogenesis of Graves disease because of the effects of vitamin D on the immune system. In our study the role of vitamin D deficiency in the activation of Graves disease, development of autoimmune thyroid disease and the relationship between vitamin D and inflammatory markers were investigated.

METHODS

Our study included 40 patients with active Graves disease, 20 patients with euthyroid autoimmune thyroid disease, 20 healthy individuals and total 80 people. Serum 25(OH)D levels, thyroid autoantibodies and fibrinogen, erithrocyte sedimentation rate and hsCRP as inflammation markers were studied in all subjects and waist and hip circumferences were measured and body mass indices were calculated. We seeked relationship of vitamin D levels between Graves disease activation and inflammatory markers in all groups.

RESULTS

Vitamin D levels were found to be significantly lower in active Graves disease and autoimmune thyroid disease patients from the control group. Vitamin D showed a positive correlation with corrected calcium, serum phosphorus, urinary calcium excretion and was negatively correlated with alkaline phosphatase, parathyroid hormone, TRAb and anti TPO. Vitamin D levels of patients with ophthalmopathy were significantly lower than the patients without ophthalmopathy. In our study, we observed that vitamin D deficiency is also associated with obesity and inflammation.

CONCLUSIONS

Vitamin D deficiency can play a role in the pathogenesis of autoimmune thyroid disease and thyroid ophthalmopathy. Vitamin D deficiency can also predispose to inflammation in patients with active Graves disease.

References

Bahn RS. Autoimmunity and Graves Disease. Clin Pharmacol Ther. 2012 Apr; 91(4): 577–579.
Holick MF. Vitamin D deficiency. N Engl J Med. 2007;357(3):266-81.

