

The Effect of Vitamin D on Thyroid Autoimmunity

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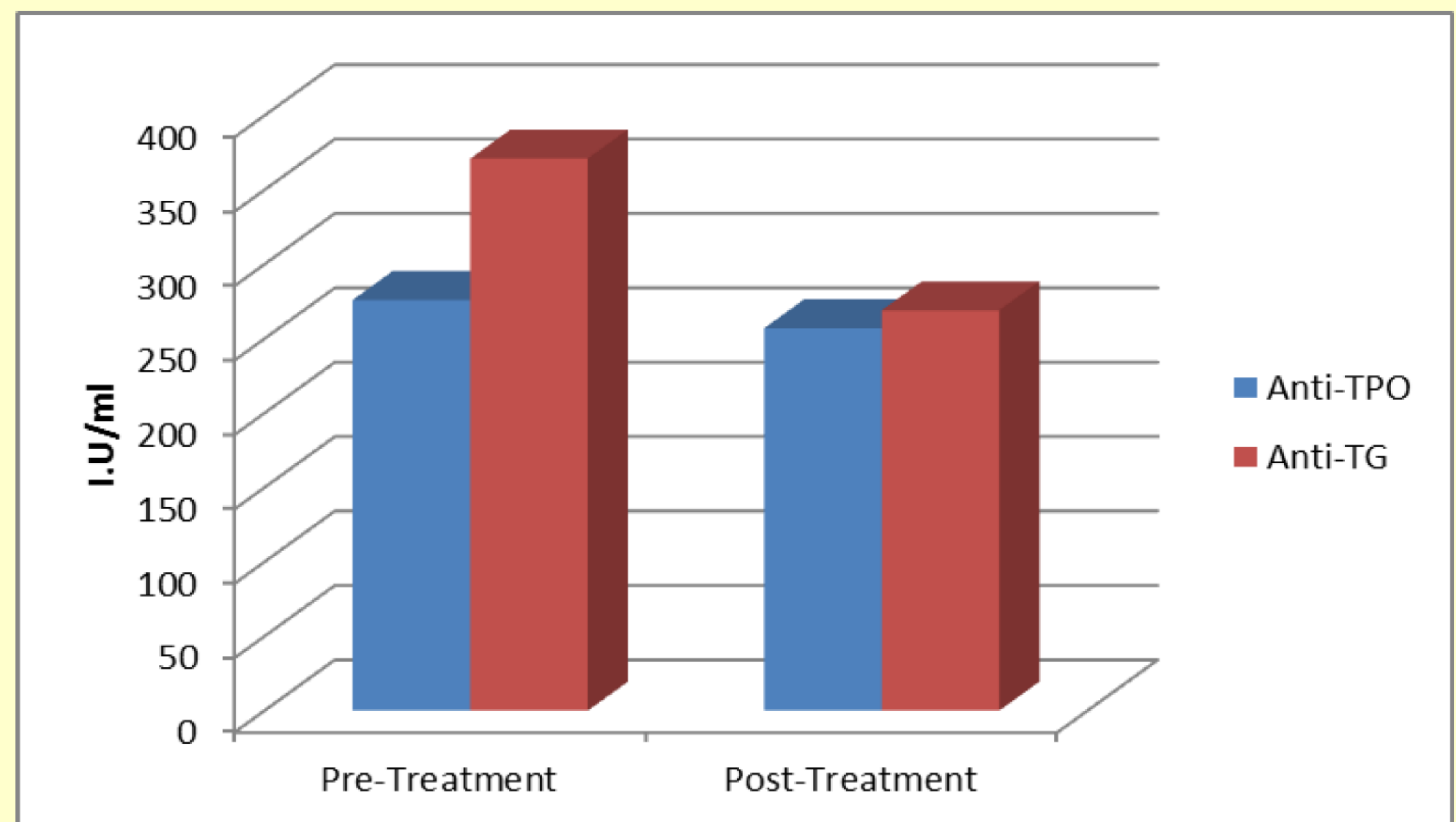
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OBJECTIVES

Although, vitamin D (vitD) mainly regulates calcium and phosphate metabolism, its deficiency may also be involved in the etiopathogenesis of carcinomas, autoimmune diseases, infections, respiratory and cardiac diseases. VitD deficiency has been defined to correlate with increased autoimmune disease such as type 1 diabetes mellitus, rheumatoid arthritis, autoimmune thyroid diseases (AITD). Some of studies have suggested that patients with AITD had lower vitD levels when compared with healthy controls. It shown that vitD supplements prevent the development and progression of autoimmune disorders like type 1 diabetes mellitus and multiple sclerosis in some experimental studies. We aimed to assess the effect of vitD on antibodies titers in patients with AITD.

METHODS

Twenty-four participants were enrolled in the study. All of the participants were diagnosed AITD and vitD deficiency. We assayed the anti-thyroid peroxidase (anti-TPO) and anti-thyroglobulin (anti-Tg) antibodies levels before and a month after vitD replacement. We started to vitD replacement as 2000 International Units (I.U)/day.



RESULTS

The participants had 66.6 % subclinical hypothyroidism, 8.3% subclinical hyperthyroidism, 12.5 % overt hypothyroidism, 12.5 % overt hyperthyroidism. Anti-TPO titers were 276.6 42.7 I.U/ml, 257.1 40.1 I.U/ml ($p < 0,001$) and anti-Tg titers were 371.9 64.3, 269.3 36.4 ($p < 0,001$) respectively, before and after vitD replacement. There was a statistically significant decrease in anti-TPO and anti-Tg levels after vitD replacement.

CONCLUSIONS

Vitamin D replacement may be useful in the treatment of AITD. Further studies are needed to assess the role of vitD replacement therapy in the treatment of autoimmune diseases.

References

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