A156 THYROID DISEASE AND VITAMIN D DEFICIENCY

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10.1136/ard.2010.129650g

Background The role of vitamin D as an immune-modulator has been emphasised in recent years, and low levels of this hormone were observed in several autoimmune diseases.[1] Vitamin D mediates its effect through binding to vitamin D receptor (VDR) and activation of VDR-responsive genes. VDR-gene polymorphism was found to associate with autoimmune thyroid diseases (AITD), however studies exploring levels of vitamin D in patients with AITD are scarce and yield conflicting results. We therefore evaluated the levels of vitamin D in patients with AITD compared with non-autoimmune thyroid disease and healthy subjects.

Methods Serum vitamin D levels were measured in 50 patients with AITDs, 42 patients with non-autoimmune thyroid diseases and 98 healthy subjects using the Liaison chemiluminescent immunoassays (DiaSorin, Italy). Vitamin D deficiency was designated at <10 ng/ml. Patients were evaluated for anti-thyroid antibodies, thyroid function and demographic parameters.

Results The prevalence of vitamin D deficiency was significantly higher in patients with AITD compared with healthy individuals (72% vs 30.6%; p<0.001), and in patients with Hashimoto's thyroiditis compared with patients with non-AITD (79% vs 52%; p<0.05). Vitamin D deficiency significantly correlated with the presence of anti-thyroid antibodies (p=01) and a trend towards an association with disturbed thyroid function was also observed (p=0.59).

Conclusion Significantly low levels of vitamin D were documented in patients with AITD, and were related to the presence of anti-thyroid antibodies and disturbed thyroid function. Although further studies are required, the role of vitamin D in the pathogenesis of autoimmune thyroid diseases is suggested and supplementation should be considered.

REFERENCE

1. Kamen DL, Cooper GS, Bouali H, *et al*. Vitamin D deficiency in systemic lupus erythematosus. *Autoimmun Rev* 2006;**5**:114–7.