EFFECTS OF VITAMIN D SUPPLEMENTS ON PATIENTS WITH HYPOTHRYOIDISM

Rabbi Syeda¹, Catcov Carolina¹

¹ Department of Pharmacology and Clinical Pharmacology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova.

Introduction: Hypothyroidism is a common endocrine disorder, ranging from 0.1% to 12.5%; women are more likely to develop the condition. The causes can be multiple, but most often 20-30% of cases are of autoimmune origin. Vitamin D supplementation has shown potential benefits in improving thyroid function in individuals with hypothyroidism and concurrent vitamin D deficiency, particularly in cases involving autoimmune thyroid diseases. The evidence suggests that vitamin D may play a role in modulating immune responses and enhancing thyroid hormone levels, although the effects can vary based on the duration and dosage of supplementation.

Material and Methods. Have been selected and analyzed 24 articles from PubMed, NCBI, Google Scholar, as well as medical books, scientific journals published in the 2012-2024 period.

Results. Long-term vitamin D supplementation, greater than three months, has been associated with significant improvements in thyroid-stimulating hormone (TSH), triiodothyronine (T3), and thyroxine (T4) levels in patients with autoimmune thyroid diseases. In patients with Hashimoto's thyroiditis, vitamin D supplementation significantly reduced anti-thyroid peroxidase antibody and thyroglobulin antibody levels, while also decreasing TSH and increasing free T3 and free T4 levels. Vitamin D correction in subclinical hypothyroid patients led to a significant decrease in TPO-Ab and anti-TG antibody levels, suggesting an improvement in thyroid autoimmunity. The meta-analysis of Hashimoto's thyroiditis patients indicated that active forms of vitamin D, such as calcitriol, were more effective in reducing TPO-Ab levels compared to vitamin D2 or D3, especially with treatment durations exceeding 12 weeks.

Coclusions. Supplementation with vitamin D, alongside other micronutrients, showed improvements in insulin resistance and physical quality of life in hypothyroid patients, although no significant changes were observed in TSH or FT4 levels in the short term.

Keywords. Vit. D supplements, hypothyroidism, autoimmune disease.