

Hypothyroidism and its effect on serum vitamin D and iron among adult female A review from Middle East perspective

ABSTRACT

Hypothyroidism is a pathophysiological phase in which insufficient hormones are produced, leading to an imbalance in basal metabolic rate and inefficiency in the physiological role of body systems. Vitamin D affects thyrocytes by decreasing thyroid-stimulating hormone (TSH) stimulated iodide uptake and cellular development. In hypothyroidism, hypovitaminosis D is due to malabsorption from the intestine and inactivation of vitamin D. Thyroid hormones induce erythropoietin gene expression causing an increase in the secretion of erythropoietin. Iron deficiency decreases the activity of the thyroid peroxidase enzyme. Hypothyroidism can cause microcytic anaemia due to malabsorption of iron and menorrhagia. Hypothyroidism is a common but under-recognized and under-diagnosed condition in the Persian Gulf countries. Moreover, the evaluation of the effect of hypothyroidism on vitamin D and iron levels is inadequate. Identifying this bi-deficiency is essential so that doctors can identify and treat them earlier and reduce the deficiency-related complications, and supplements can be given to prevent further health complications like osteoporosis and iron deficiency anaemia.