Letter to the Editor

Treating vitamin D deficiency (VDD) can also play a role in fight against chronic diseases

Madam, although the best characterized sequalae of low levels of vitamin D are associated with the musculoskeletal system, recent research identifies the association of many chronic diseases especially high blood pressure, stroke, diabetes and cancer with vitamin D deficiency (VDD).[1]

Vitamin D receptor (VDR) has a broad tissue distribution and recent literature reports association of VDD with cardiovascular diseases, stroke, diabetes and cancer. Absence of VDR activation in VDD leads to tonic up regulation of the rennin-angiotensin system, leading to hypertension, left ventricular hypertrophy, coronary artery calcification, and prevalent cardiovascular diseases. Vitamin D exerts its all adults. As few human foods naturally contain or are fortified with vitamin D, dietary intake is unlikely to meet the daily requirement. However, adequate amounts of Vitamin D can be made in the skin after exposure to sunlight between 10:00 am to 3:00 pm. Therefore, among the lifestyle modifications, casual exposure of the skin to sunlight might be the major source of the vitamin; taking care that the penetration of UVB photons into the skin is impaired by various factors such as latitude, season, skin pigmentation and protection of sun exposed skin areas by sunscreens and clothing.[2,3]

Prevalence of 80-90% of VDD is currently reported from different areas of Pakistan.[4-6] This is surprising to see so much of VDD in a country with ample sunshine. Considering the important role of vitamin D in bone health and calcium metabolism as well as possible role in several other health outcomes, including the development of cancer, muscle weakness, insulin resistance, diabetes, cardiovascular disease, beneficial effect on preventing risk of many cancers by inhibiting tumour angiogenesis, stimulating mutual adherence of cells and enhancing intercellular communication through gap junctions, thereby strengthening the inhibition of proliferation that results from tight physical contact with adjacent cells.[2,3]

Evidence indicates that intake or synthesis of vitamin D via supplementation or life style measures is associated with reduced incidence and death rates of many cancers as well as reducing the risk of cardiovascular disease and stroke. It is suggested that vitamin D intake above current recommendations may be associated with better health outcomes. An intake of 1,000 IU of vitamin D/day is needed for tuberculosis and several autoimmune diseases, it may be relevant to take into account measures to combat its deficiency to fight against chronic diseases.

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