



EXTENDED ABSTRACTS

Prevalence of Vitamin D Deficiency in Karachi

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ABSTRACT

Vitamin D is important for all cells of physical body for correct function. It's vital for building bones and muscles. Deficiency of vitamin D might result in "Osteoporosis" (loss of bone density), poor immune function, migraines, weak and achy muscles, fatigue, thinning hair and brittle nails. Cancer is additionally a significant disease which is linked with deficiency of vitamin D. Sunlight is that the most vital and naturally available source of this vitamin. Our kidneys must convert it to its active form, Vitamin D_{1,25}. Some foods also contain vitamin D, like milk and a few citrus juices. The objective of the study was to seek out the prevalence of vitamin D deficiency among the general population of Karachi. Blood samples were collected from different regions of Karachi including both males and females and from different age brackets which were further analyzed through CLIA technique. 200 samples were collected through which we found that 82.50% were deficient and 17.50% were normal and as compared to males females are more deficient from level of vitamin D in their blood. Consistent with our survey we will conclude that there's a more percentage of vitamin D deficiency in Karachi population and females are more affected from this deficiency. So, there's a need from higher authorities to require serious action regarding this problem. Vitamin D deficiency has assumed pandemic proportions everywhere the planet. It's been documented as a frequent problem in studies of young adults, elderly persons and youngsters in other countries, but there's no reliable data on vitamin D status of adult asthmatic patients in Pakistan. To work out the prevalence of vitamin D deficiency and insufficiency in adult asthmatic patients with moderate to severe asthma employing a cross-sectional study design in Basic Medical Sciences Institute, Jinnah Postgraduate Medical Centre, Karachi. 311 adult asthmatic patients with moderate to severe asthma were recruited from JPMC, tertiary care hospital in Karachi. Questionnaires were administered together with demographics, height, weight, nutritional and physical activity assessment. Blood samples for vitamin D measurement were also taken. Results show high prevalence of vitamin D deficiency and insufficiency (88.10%) in adult patients with moderate to severe persistent asthma. Vitamin D deficiency and insufficiency was more frequently observed in females than in male patients. 67.66% of the feminine patients had serum vitamin D level but 20 ng/ml as compared to 56.1% of the male patients ($p=0.01$). To start with vitamin D discussion it's essential to understand what it actually is, vitamin D may be a precursor hormone which is essentially of two forms. Ergocalciferol and Cholecalciferol. Ergocalciferol also famous as vitamin D₂ is found in specific fishes and plants on the opposite hand cholecalciferol also referred to as vitamin D₃ synthesis takes place within the skin in presence of sunlight. For us humans our daily requirements of vitamin D₃ are often acquired but taking oral vitamin D₃ supplements or just by being exposed to sunrays for only enough time to supply sufficient amount of vitamin D₃ required. It D is on top of things of calcium absorption within the small bowel, working synergistically with PTH to assist with bone

mineralization and help maintain homeostasis of calcium in blood. On the opposite hand many recent studies have suggested strong relationship between low vitamin D levels and various diseases, as it's an honest immune modulator and also has anti-inflammatory properties and it's also known to possess effect on cytokines levels. It's a really essential role on mortality rates on people undergoing dialysis because it prevents secondary hyperparathyroidism many retrospective studies has proven this fact. There's also a suggestive correlation between low serum vitamin D levels in CKD patient on dialysis and increased mortality rates. Only suggestive correlation not proven otherwise as shown in other studies. There are receptors of vitamin D in smooth muscles of vessels; endothelium cardiomyocytes may have certain effect on CVDs. A relationship between low vital sign and low vitamin D levels, disorder, and arteriacoronaria calcification has been seen in several studies. Quite one thousand seven hundred participants from Framingham offspring study examined the amount of incident cardiovascular events and vitamin D levels. Taking into consideration the newest of studies of humans and animal models, it implies that vitamin D plays a neighborhood in homeostasis of the metabolism of glucose and also in development of DM (DM) type 1 and sort 2. Link between vitamin D exposure in early stages and development of type 1 DM has been suggested by epidemiologic data. Receptors of Vitamin D₃ are strong immune-modulating. A couple of populations develop type 1 DM in association with polymorphisms within the gene of vitamin D receptor. Evidence shows there are fewer risks of development of type 1 DM in infants if vitamin D intake is increased. The most found metabolic disease within the world is Osteoporosis. The danger of low vitamin D level can establish it. The active Trans cellular immersion of calcium is decreased by scarce serum vitamin D levels. The newest meta-analysis of random and controlled trials which consisted of quite forty two thousand people, found that the supplementation of vitamin D of quite four hundred daily IU, brought down incidence of non-vertebral fractures a touch. The effect was hooked in to the dose and was insignificant.

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