Estimation of Vitamin D levels in Women of Child bearing Age Group from Countryside: A Retrospective Observational Analytical Study

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Letter to Editor

In spite of abundant sunlight Vitamin-D deficiency is quite common in Middle East, Asian countries and India [1-3]. Many Indian studies are available recruiting mainly urban population. We went to determine status of Vitamin-D deficiency in local population. Here people are engaged in agricultural activities, no industrial pollution either. This is probably first study focusing on country side population.

We collected data about Vitamin-D levels in women of child bearing group from record section starting November 01, 2014 to December 31, 2016. Blood samples for Vitamin-D/Hemoglobin estimations were collected by peripheral venepuncture. Hemoglobin was estimated by standard Drabkin’s Reagent Method. Vitamin-D levels were estimated by LCMSMS-Liquid Chromatography Tandem Mass Spectrometry [4]. This technique and machine measures serum vitamin-D levels beyond 4.2 monograms/ml. So values less than 4.2 nanograms/ml are read as UNDETECTABLE.

Only 14 Women had Vitamin-D levels more than 30 ng/ml [9/451=3.01%]. Only 46 women [46/451=10.2%] were holding office/indoor jobs; 405/451 worked [89.8%] in open fields/busy in agricultural activities. 26 women [5.8%] had very low or Undetectable Vitamin-D levels, 265 [58.7%] had Vitamin-D levels more than 4.2 but less than 15 and 146 participants [32.3%] had Vitamin-D levels more than 15, but less than 30 nanograms/ml.

26 women [5.8%] had very low or Undetectable Vitamin-D levels, 265 [58.7%] had Vitamin-D levels more than 4.2 but less than 15 and 146 participants [32.3%] had Vitamin-D levels more than 15, but less than 30 nanograms/ml.

There were 451 participants; their age ranging from 18 years to 49 years (Figure 1).

Figure 1: Distribution pattern of Vitamin D levels.

Many people are not aware of benefits of Vitamin-D and sunlight.
Could this be an adaptation, or an evolutionary change to prevent excessive levels of vitamin-D? Irrespective of etiology, the magnitude of the problem is significant and deserves implementation of preventive measures.

References


