Letter to Editor

iMedPub Journals
http://www.imedpub.com/

ARCHIVES OF MEDICINE
ISSN 1989-5216

2017
Vol.9 No.4:14

DOI: 10.21767/1989-5216.1000235

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

Gokhale SG*, Kadrekar Meena and Gokhale Sankalp

Department of Pediatrics and Neonatology, Rajhans Hospital and Research Center, Saphale, India

***Corresponding author:** Gokhale SG, Department of Pediatrics and Neonatology, Rajhans Hospital and Research Center, Saphale, India, Tel: 091-800-779-8400; E-mail: rajhanssanjay@gmail.com

Received date: August 02, 2017; **Accepted date:** August 10, 2017; **Published date:** August 14, 2017

Citation: Gokhale SG, Meena K, Sankalp G. Estimation of Vitamin D levels in women of child bearing age group from countryside: A retrospective observational analytical study. Arch Med. 2017, 9:4

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.

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

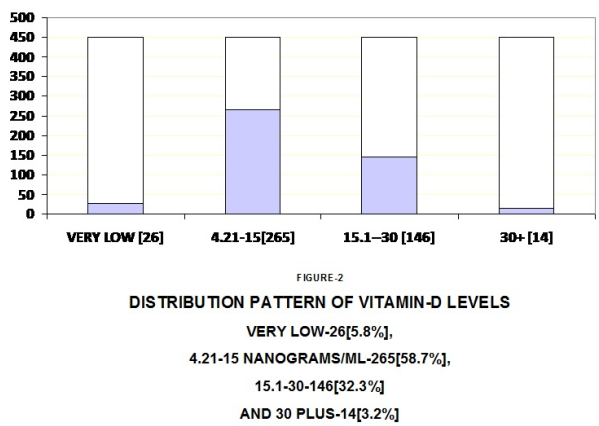

Figure 1: Distribution pattern of Vitamin D levels.

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. Only 14 women [3.2%] had vitamin- d levels more than 30. 12 were unmarried and did not have children. One was married but non-pregnant 280/451 participants were first para, 155 had two babies, two had five children, and one was grand multipara [8 babies]. 37/451=8.12% had reasonable hemoglobin levels at or more than 12 gms/dl. Only 3.01% showed vitamin-D more than 30 ng/ml, or in other words 96.89% moms were vitamin-D deficient.

The problem of vitamin-D deficiency with abundant sunshine is multifaceted. Serum levels of Vitamin-D more than 30 ng/ml (to convert ng/ml to nmol/ml multiply by 2.5) are considered as 'normal'. Levels between 20 and 30 ng/ml are defined as 'insufficiency' and levels less than 20 ng/ml are defined as 'deficiency' [5]. Genetic factors like-Genetic variability of Vitamin-D Binding Protein and 'HIGH 24-25 HYDROXYLASE ENZYME ACTIVITY' seem to be operating [6-8]. Additionally women wear cultural dresses like Saree, Ghunghat or Burqa covering entire body with NO exposure to sunlight **(Figure 2)**.

Figure 2: Saree, Burqa and Ghunghat.

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

1. Nicolaidou P, Hatzistamatiou Z, Papadopoulou A, Kaleyias J (2006) Low Vitamin D status in mother-Newborn pairs in Greece. Calcif Tissue Int 78: 337-342.
2. Harinarayan CV (2014) The multiple roles of Vitamin D. NFI Bull 35: 3.
3. Paxton GA, Teale GR, Nowson CA, Mason RS, McGrath JJ, et al. (2013) Vitamin D and health in pregnancy, infants, children and adolescents in Australia and New Zealand: A position statement. Med J Aust 198: 142-143.
4. Holick MF (2011) The Vitamin D solution. Penguin Group First Plume Printing, pp: 149-151.
5. Zaidi S (2012) Power of Vitamin D. 1st Indian edn., STM Publishers, Mumbai, India, pp: 149-176.
6. Londhey V (2011) Vitamin D deficiency: Indian scenario. J Assoc Physicians India 59: 695-696.
7. Awumey EM, Mitra DA, Hollis BW (1998) Vitamin D metabolism is altered in Asian Indians in the southern United States: A clinical research center study. J Clin Endocrinol Metab 83: 169-173.
8. Fu L, Yun F, Oczak M (2009) Common genetic variants of the vitamin D binding protein (DBP) predict differences in response of serum 25-hydroxyvitamin-D[25(OH)] to vitamin D supplementation. Clin Biochem 42: 1174-1177.