Vitamin D status in hypertension and its link with lifestyle

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Background: Hypovitaminosis D is widely prevalent in the Indian populations despite good sunlight exposure. Our landmark study has proven this first in 2000 in patients with tuberculosis and in the apparently normal individuals (Ref1). The role of vitamin D in several diseases is now becoming clearer and its role in hypertension and cardiovascular disease has been proven and studied in some western populations. There are little data on Vitamin D status in hypertensive patients in the Indian context.

Aims & Objectives: a) To assess the vitamin D status in patients with essential hypertension and to compare the vitamin D status, dietary intake of vitamin D, physical activity and sunlight exposure among hypertensives and age and gender matched normotensive controls. b) To correlate vitamin D levels with dietary intake, physical activity, BMI and daily sunlight exposure.

Materials & Methods: 55 subjects and 32 controls were studied over a period of nine months from December 2011 to August 2012. Their 25 Hydroxy Vitamin D levels, daily sunlight exposure, dietary intake, physical activity were assessed and subjected to statistical analysis.

Results: The mean 25(OH) D levels for hypertensives were found to be 17.07 ± 9.72 ng/ml while in the normotensive controls were 22±10ng/ml (p=0.027). Only 20 % of the total population i.e. cases and controls had sufficient levels above 30ng/ml. Higher dietary intake i.e. >200 IU/day were found to have lesser incidence of hypertension.

Conclusions: Vitamin D levels are significantly lower in hypertensive patients. Overall levels are low in the general population also. Adequate dietary intake, physical activity and sunlight exposure are protective. Similar was the observation in the landmark study on patients with tuberculosis. The link to Vitamin D and deficiency lifestyle diseases and the solutions will be discussed in the talk.

Biography
Sasidharan P K is the Vice-President of Hypertension Society of India. He was formerly the Professor of Medicine & Head of the Department of Medicine, Calicut Medical College. He is a Research Guide at the University of Calicut, Scientific Advisory Committee Member at National Institute of Immuno Hematology, Mumbai and Dean Faculty of Medicine for University of Calicut. He is awarded the best outgoing student for MBBS. He received MD from Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh. He has 7 awards and fellowships to his credit and teaching experience of 32 years. He has published 73 papers, 4 books and authored chapters in textbooks of Medicine and Hematology. He has done two land mark studies on Vitamin D and SLE. He has attended more than 500 guest speaker/paper presentations in national & international conferences. sasidhararppk@gmail.com

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