

Prevalence of Vitamin D Deficiency among Healthy School Children in Jaipur District, Rajasthan, India

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Introduction

Vitamin D deficiency is one of the common nutritional deficiency(1) and it exists in both childhood and adult life. Vitamin D not only regulate calcium and bone metabolism but also confer protection against type 1 diabetes mellitus, autoimmune diseases, malignancies and various infectious diseases (2). Recent data indicate that vitamin D deficiency is pandemic. Though the majority of population in India lives in areas receiving ample sunlight throughout the year, vitamin D deficiency is very common in all age groups and both the sexes across the country (3). The prevalence of vitamin D deficiency is 50-90 % in the Indian subcontinent (4). We conducted our study to know the magnitude of vitamin D deficiency and insufficiency. This was a cross sectional study which includes 96 apparently healthy school going children (50 Male & 46 Female) at age 5 to 10 years. We found that 33.33% (15 Male & 17 Female) had vitamin D levels [25-hydroxy vitamin D (25(OH) D)] less than 25 nmol/L, 33.33 % (14 Male & 18 Female) had between 25- 50 nmol/L, 20.83% (14 Male & 6 Female) between 50- 75 nmol/L and 12.50% (7 Male & 5 Female) had more than 75 nmol/L. Our data indicate that 87.50% children (86% Male and 89.13% Female) of Jaipur region have sub optimal and deficient vitamin D levels. Inadequate sun exposure (because of social or religious norms related to public modesty and fear of dark complexion), inadequate dietary intake of vitamin D due to vegetarian diet, lack of vitamin D fortified food and adulteration of milk and milk products are the suggested causes of vitamin D deficiency in these children. Parents and children should be educated on the benefits of a combination of sun exposure, vitamin D fortified food items, supplements and regular physical exercise. Replacement needs to be tailored depending on the degree of insufficiency.

Key Words: India, Insufficiency, Jaipur, Vitamin D deficiency.

Conflict of interest: None.

References

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