Prevalence of vitamin B12 and folate deficiency in school age children residing at high altitude regions in India

Aakriti Gupta and Umesh Kapil
All India Institute of Medical Sciences, India

Background & Aim: Vitamin B12 and folate deficiency is associated with poor cognitive function and anemia amongst school age children. High prevalence of vitamin B12 and folate deficiency have been earlier reported amongst school age children in plain regions of India. The present study was conducted to assess the prevalence of Vitamin B12 and folate deficiencies among children residing at high altitude regions of Himachal Pradesh, India.

Material & Methods: A total of 215 school children in the age group of 6-18 years were included. Biochemical estimation of serum vitamin B12 and folate levels was undertaken using chemiluminescence immunoassay method. The consumption pattern of foods high in dietary vitamin B12 and folate was recorded using food frequency questionnaire.

Results: The median level (interquartile range) of serum vitamin B12 was 326 (259-395) pg/mL and 7.7 (6-10) ng/mL of folate. We found that the prevalence of vitamin B12 and folate deficiency amongst school age children was 7.4% and 1.5%, respectively. This was possibly due to high frequency of consumption of foods rich in vitamin B12 and folate.

Conclusion: The findings of the present study revealed low prevalence of vitamin B12 and folate deficiencies amongst children aged 6-18 years living at high altitude regions in India. This was possibly due to high frequency of consumption of foods rich in vitamin B12 and folate. Hence dietary interventions including promotion of regular consumption of foods with high vitamin B12 and folate may be a potential strategy for improving vitamin status of the population.

aguptaaims@gmail.com