Is zinc deficiency a worldwide problem and is there a silent epidemic in Saudi Arabia?

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Abstract

**Background:** Zinc is an important trace mineral for our body, the deficiency of which can cause many complications like inadequate or stunted growth, immune deficiency with increased morbidity, etc. As per literature, in more severe cases, zinc deficiency causes hair loss, diarrhea, delayed sexual maturation, impotence, hypogonadism in males, and eye and skin lesions. Weight loss, delayed healing of wounds, taste abnormalities, and mental lethargy can also occur. Therefore, it is important that Zinc levels should be done especially when even any of the above nonspecific symptoms and signs are present. Zinc absorption is inhibited by phytates (seen in cereals, rice, corn, etc), cadmium (from environment), etc and this is an important factor to be considered apart from Zinc intake, etc. A "best-estimate" model, comprised of zinc and phytate data from a composite nutrient database and International Zinc Nutrition Consultative Group physiological requirements for absorbed zinc, estimated the global prevalence of inadequate zinc intake to be 17.3%. Range varied from 12-66 % with different methodologies. **Aim:** To determine the prevalence of Zinc deficiency in the MEDICAL PROTOCOL DEPARTMENT-OUT-PATIENT CLINIC at King Fahad Hospital-National Guard Health Affairs-Riyadh, KSA. **Methods:** About 1000 patients of both genders between the ages of 15-90 & above over a period of 6 months (in 2013) of our regular out-patient clinic were tested for Zinc deficiency irrespective of any signs or symptoms. **Results:** Out of 1000 patients about 440 (44%) patients were low in Zinc levels and treated for Zinc deficiency. **Conclusions:** 1. There is a high prevalence of Zinc deficiency (44 %) in our outpatient clinic population at King Fahad Hospital. So, there is probably Zinc deficiency in greater numbers in the general population which should be addressed before it becomes an epidemic if there is not one already. 2. Most of the women with Zinc deficiency complained of hair loss. 3. Factors especially phytates that inhibit Zinc absorption should be considered and lower dietary phytates introduced in the foods we eat, especially for children.

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