

VITAMIN A DEFICIENCY

Pages with reference to book, From 120 To 121

Vitamin A is essential for man and animal. It is necessary for normal vision, general growth and differentiation of epithelial tissues (Wald, 1960; Moore, 1957; McLaren, 1966; Wolbach and Howe, 1925).

Vitamin A deficiency or hypovitaminosis is said to be primary when it arises due to lack of this vitamin or its precursor in diet, carotenoids and is called 'Secondary' when certain pathological and physiological conditions affect the utilization of vitamin A (Sebrell and Harris, 1967).

Hypovitaminosis A in animals affects growth, reproductivity, skeletal, nervous and epithelial systems (Moore, 1957). In human beings it affects the eyes causing xerophthalmia and night blindness. Night blindness is reversible with vitamin A therapy but partial or total blindness due to xerophthalmia is irreversible and it accounts for blindness in 20,000-1,00,000 young children annually (McLaren et al., 1965; WHO, 1973).

A global survey on vitamin A reveals that vitamin A deficiency is wide-spread in young children in many parts of the world. The situation is really serious in highly populated and underdeveloped countries with major problems of dietary deficiencies with or without diseases. The areas severely affected are, South and East Asia such as Bangladesh, Southern India, Indonesia and Phillipines. Next are tropical Africa, the eastern Mediterranean regions and central parts of Latin America (Oomen et al., 1964; WHO, 1973; WHO/USAID, 1976).

According to WHO standards hypovitaminosis 'A' can be regarded as health hazard when clinically 2% population have Bitot's spots with xerosis, 0.01% have corneal xerosis, corneal ulceration+Keratomalacia or 0.1% have corneal scars. Biochemically 15% or more of the population presents subclinical levels of vitamin A (McLaren, 1966; PAHO, 1976).

Previously in Pakistan nutrition surveys and individual studies have shown only the prevalence of vitamin A deficiency, clinically, sub-optimal intake of vitamin A and subclinical levels of vitamin A, but none of the single study measures the severity of the problem or its significance (Malik et al., 1968; Kirmani, 1968, 1979; Nutr. Survey West Pak., 1970; Undre et al, 1972; NMNS", 1977). Recently, a triphasic study has been conducted by Ibrahim (1980) which clearly indicates that according to WHO criteria (biochemically) only children under 15 years of age are at risk in Karachi. The main etiological cause and the ocular manifestation of vitamin A deficiency in this segment of population may appear to be due to low intake of vitamin A associated with mild protein energy malnutrition.

Recent evidences also suggest that vitamin A deficiency is also associated with oral cancer (Ibrahim et al., 1977) and is found in liver diseases (Zuberi and Ibrahim, 1974).

As hypovitaminosis A presents a public health problem in children under 15 years of age without any serious consequences even then it should be given a high priority in the context of public health as it can be presumed from animal experiments that prolonged low dietary intake of vitamin A not only affects the growth and development but resistance to infectious diseases.

A curative and preventive programme should be launched to protect people from various diseases by Vitamin A deficiency, by oral or parenteral administration of vitamin A and in take of vitamin A rich foods to eliminate vitamin A deficiency from this country. Preferably the oral administration of concentrated form of vitamin A preparation should be recommended to pregnant and lactating mothers and to children under 15 years of age through MCH centres, school health and public health services.

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