Vitamin-A deficiency: cure lies in prevention

Dr. Mahipal S. Sachdev: Centre for Sight

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A pediatrician called me to see a child having redness in right eye. The child had come to him for diarrhea since 4-5 days. Knowing the history I could make out that the patient must be having some malnourishment and vitamin deficiency. On seeing the child, I found myself helpless as the child had keratomalecia (melting of the cornea) because of vitamin A deficiency and has lost his sight forever.

Vitamin A deficiency is the leading cause of preventable blindness in children and raises the risk of disease and death from severe infections such as diarrhoeal disease and measles. Vitamin A is essential for normal vision as well as proper bone growth, healthy skin, and protection of the mucous membranes of the digestive, respiratory, and urinary tracts against infection.

Vitamin A deficiency is a public health problem in 118 countries, especially in Africa and South-East Asia, once again hitting hardest young children.
While most people know that vitamin A deficiency can lead to blindness, many are unaware that even before blindness occurs, a vitamin A deficient child faces a 25% greater risk of dying from a range of childhood ailments such as measles, malaria or diarrhoea.

Symptoms of Vitamin A deficiency:

Night blindness may occur and is often an early manifestation of the disorder.
Other symptoms may include extreme dryness of the eyes (i.e., xerophthalmia), followed by wrinkling, progressive cloudiness, and increasing softening of the corneas (i.e., keratomalacia). With advancing vitamin A deficiency, dry, "foamy," silver-gray deposits (Bitot spots) may appear on the delicate membranes covering the whites of the eyes. Without adequate treatment, increasing softening of the corneas may lead to corneal infection, rupture (perforation), and degenerative tissue changes, resulting in blindness.

Signs of Vitamin A Deficiency:

Vitamin A deficiency results in atrophy and keratinisation of epithelium, leading to:

- Dry skin and hair.
- Increased incidence of ear, sinus, respiratory, urinary, and digestive infection.
- Inability to gain weight.
- Drying of the cornea with ulceration - xerophthalmia.

- Nervous disorders.
- Skin sores.
- There may be night blindness or decreased ability for dark adaptation.

Management:

WHO's goal is the worldwide elimination of Vitamin A Deficiency and its tragic consequences, including blindness, disease and premature death. Basis for lifelong health begins in childhood. Vitamin A is a crucial component:

Breastfeeding: Breast milk is a natural source of vitamin A. Promoting breastfeeding is the best way to protect babies from Vitamin A Deficiency.

Vitamin A supplementation: Ensuring that children get enough vitamin A enhances their chances of survival, reduces the severity of childhood illnesses, eases the strain on health systems and hospitals, and contributes to the well-being of children, their families and communities. Supplementing children aged six months to five years with two high-dose vitamin A capsules a year has been identified as a safe, cost-effective, efficient strategy for ending vitamin A deficiency. Giving vitamin A to new mothers who are breastfeeding helps protect their children during the first months of life.

Vitamin A is found in milk, liver, eggs, fish, red and orange fruits and green leafy vegetables. Foods that contain significant amounts include apricots, beet greens, fish liver and fish liver oil, garlic, papayas, peaches, pumpkin, spinach, sweet potatoes.

Food fortification is also a central strategy that is being introduced in more and more countries and holds great hope for the future. In some parts of the world, food staples like sugar, flour and margarine are fortified with vitamin A and other micronutrients. In case of suspected / established Vit. A deficiency treatment by oral / Injectable Vit. A in large doses is given.

Vitamin A Deficiency is a major cause of preventable blindness in children the world over and still remains a problem in the developing countries. In India alone, there are over 200,000 children blinded from this condition. It most commonly occurs in children during the ages of 3 to 6 years of age. So its prevention is the best management done at the personal level. So go ahead and ensure that your child eats lots of green vegetables, fruits and drinks a glass of milk everyday to keep away from Vitamin A deficiency.