

Awareness of Vitamin A Deficiency among Middle Aged Men-Research

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Abstract

Aim: To create awareness about Vitamin A deficiency among middle aged men.

Objective: The objective of this study is to find the etiology, diet, symptoms and factors affecting Vitamin A deficiency among middle aged men.

Background: Vitamin A is an unsaturated organic compound. It is present as retinoids in animals and beta-carotene in plants. This vitamin is responsible for maintaining good vision, immunity and helps in development but the deficiency of vitamin A is the key cause of night blindness and other vision disorders. Vitamin A deficiency is due to the lack of information among the people about nutritional eating, since diet is the major cause of this deficiency. Along with diet, many infections are present in developing countries which drain the vitamin A reserve leading to a deficit making the individual more susceptible to infections. So awareness is the key to prevention. Vitamin A deficiency is common in developing countries, and is said to cause blindness to cause in over 500,000 children year.

Reason: To create awareness among men so that they could influence their families to become healthier and prevent the newer generations to become affected by this disease.

Keywords: Coliform; Microbial; Milk; Quality; Yeast

Introduction

The Vitamin was derived from the term "Vital amine" referring to Christian Eijkman's discovery of an amine extracted from rice polishings to prevent beriberi from that researchers have found out that vitamins are vital organic components that the human body cannot synthesize. The vitamins are classified into two types that are the fat soluble vitamins and the water soluble vitamins. Vitamin A, D, E and K belong to the fat soluble class and the remaining into the latter [1,2] Vitamin A was the first fat soluble vitamin discovered in 1906 but it's importance was studied years before its discovery in ancient Egypt where the Physicians treated night blindness by squeezing the juices of grilled lamb's liver into the eyes of the affected patient [3]. The structure of Vitamin A is a β -ionone ring and isoprenoid chain and its activity is linked with these structural features. Vitamin A in food is found into 3 main forms that are the retinols, beta carotenes and the carotenoids. Retinol or preformed vitamin is the most active form found from animal sources. β carotene is known as the provitamin A is obtained through plants and Carotenoids is the largest group made up of free alcohol or fatty acyl ester structure. Retinol is predominantly seen in the human body and the Retinol-Binding protein (RBP) is responsible for the absorption and metabolism of vitamin A [4].

The main role of vitamin A is its role seen in vision but other important functions include regulation of gene expression, maintains the epithelial tissue, functioning of the immune system, embryonic development and metabolism of zinc and iron. Deficiency of vitamin A can result due to inadequate intake, fat malabsorption or liver disorders; this is found mainly in malnourished, elderly and sick but most prevalent in the developing nations. It is endemic in areas such as

South East Asia, where rice is the staple food is a devoid of β carotene. Xerophthalmia is the primary deficiency of vitamin A that is a cause of blindness in young children in developing countries. Secondary deficiency which can be due to the interference with the vitamin A metabolism can lead to celiac disease, cystic fibrosis, chronic diarrhea, duodenal bypass, giardiasis and cirrhosis. Vitamin A deficiency (VAD) is common in protein under nutrition because its storage and transport is affected. Night blindness is an early symptom due to the impaired dark adaptation of the eyes; the other symptoms are Xerophthalmia, xerosis, bitot spots, keratomalacia, keratinization of the skin and mucous membrane.

An estimated 2.8 million school children are at the risk of VAD which would lead to childhood blindness, this is a serious issue in the developing countries, thus there is an urgent need to provide awareness among the people in order to provide proper guidelines and treatment plans to eliminate the problem as a public health concern. But little is known about the awareness and knowledge level of VAD among the middle aged men (35-60), so the main purpose of the study was to assess the knowledge of Vitamin A deficiency among the Middle aged men. Even though the disease affects mainly children, the men of the society could help influence the family members towards healthy living and well informed men can play a significant role in creating increased awareness in the public.

Materials and Methods

The study was designed to evaluate the level of Vitamin A deficiency awareness among the Middle aged men (the age group from 30 to 60) living in Chennai. The study was focused on the perceptions of knowledge about Vitamin A, causes and risk factors associated with the disease. A total of 50 men volunteered and successfully completed the

survey. The participants were from both medical and non-medical fields (Graduates).

The questionnaire used in the study was written in English and consisted of a total of 12 questions (Table 1).

S. No	List of questionnaire
1	List the major constituents of food?
2	What are the different types of vitamins present in food?
3	Do you know the fat soluble vitamins?
4	Do you think Vitamin A is important for your health?
5	Do you know the sources of vitamin A?
6	Do you include foods rich in Vitamin A in your diet?
7	Have you heard of Vitamin A deficiency?
8	Do you know what the symptoms of Vitamin A deficiency are?
9	Did you know that Vitamin A deficiency affects children more commonly?
10	Do you know what effects Vitamin A has specifically on men?
11	Do you the treatment for Vitamin A deficiency?
12	How do you think we can make people know more about Vitamin A?

Table 1: The table lists the questions of the questionnaire.

Results

A total of 50 men between the age of 30 and 60 from Chennai were approached and all 50 of them participated.

The mean age of these was 45. The respondent's level of awareness of Vitamin A and their responses are summarized in Table 2.

Details	Number (Percentage)
Total individuals approached	50 (100%)
Participants	50 (100%)
Knew all the constituents of food	38 (76%)
Never heard about Vitamin A	5 (10%)
Heard about Vitamin A	45 (90%)
Know the functions of Vitamin A	Yes: N=13 (26%) No: N=37 (74%)
Know the symptoms of vitamin A Deficiency	Yes: N=8 (16%) No: N=42 (84%)
Consume Vitamin A rich foods Like Carrots, sweet potatoes etc	Yes: N=47 (94%) No: N=3 (6%)

Table 2: This shows the number (percentage) of participants matched into categories mentioned in the table.

Knowledge about Vitamin A

90% of the participants had heard about Vitamin A with only 10% of the participants never heard about vitamin A prior to the survey. But only 13% of the participants knew the functions of Vitamin A.

Symptoms

84% participants were unaware of the symptoms of vitamin A deficiency.

Diet

94% participants included Vitamin A rich food such as Carrots, sweet potatoes, liver etc whereas 6% did include these foods in their diet.

Suggested ways of promoting awareness

Only 44% participants suggested ways of promoting awareness of vitamin A deficiency. The results are in Figure 1. The common suggestion was the use of newspapers followed by leaflets then by verbal information. Others suggested the use of advertising on TV and educational sessions.

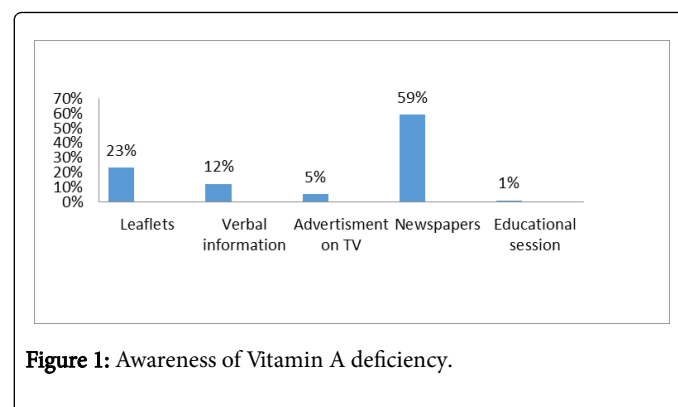


Figure 1: Awareness of Vitamin A deficiency.

Discussion

This study was conducted to assess the knowledge of vitamin A deficiency among middle aged men. Vitamin A is an important element and is needed in our body for some important metabolic activities needed the proper functioning of many human body systems. It is especially required for children for their eyesight and developing their immunity. In a recent Venezuelan study, Jimenez et al. investigated the effect of a single dose of vitamin A on iron lead to phagocytic capacity increase of neutrophils and decrease in anemia [5]. The American Academy of Pediatrics has recommended vitamin A supplementation for infants aged 6-24 months who are hospitalized, WHO also has issued statements that vitamin A should be administered to all children suffering from Measles because it reduces mortality rates.

The recommended daily allowance of vitamin A for various age groups:

Infants- 375 mcg

Children (7-10 years) - 400-700 mcg

Males older than 10 years- 1000 mcg

Females older than 10 years- 800 mcg

The frequency of Vitamin A deficiency is mainly seen in South East Asia and Sub Saharan Africa. An estimated 250 million children are at risk and 10 million develop xerophthalmia and later die of complications of measles.

The treatment for Vitamin A deficiency only through the consumption of foods rich in Vitamin A such as liver, beef, whole milk, carrots, mangoes, sweet potatoes etc. and Vitamin A supplements: 3-Dehydroretinol.

The results identify a significant need in educating the community more about vitamin A among people at risk of deficiency. The middle aged men have low levels of awareness of Vitamin A deficiency and its consequences. Gender influences on health related attitudes and behaviour are common findings [6]. The influence of age on Vitamin A awareness indicates the inaccessibility and lack of perceived relevance of much health information to the older generation.

Renewed effort is recommended to address the needs of the at risk population for education about Vitamin A deficiency and ways of avoiding it.

Means of overcoming Vitamin A deficiency:

Food based strategies such as:

- Vitamin A supplementation for pregnant women.
- Egg to be mandatory in one of the meals for children.
- Breast feeding to be compulsory for children up to 6 months.

- Awareness programs in the rural areas.

Conclusion

This study highlighted the level of awareness of Vitamin A deficiency among middle aged men which can play an important role in creating better preventive measures. Thus, a collaborative effort is required between the health care providers and the other members of the society to promote the awareness and influence families to a brighter future.

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