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LETTER TO THE EDITOR

An unusual case of “jaundice”

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To the editor

Vitamin A, absorbed when eating animal food sources, is a yellow, fat-soluble vitamin with importance in skin metabolism and bone growth. Vitamin A plays a role in a variety of other functions throughout the body, such as vision, gene transcription, immune function, and hematopoiesis. Vitamin A is found naturally in many foods: pork and beef liver, carrots, broccoli, sweet potatoes, kale, butter, spinach, leafy vegetables, pumpkin, eggs, apricots, mango, and papaya. Because of its antioxidant activities, it was suggested that consumption of some of these products could decrease the risk of coronary artery disease and decrease the risk of cancer. However, the latter remains rather unproven.

Case report

A 68-year-old white woman, diagnosed with stage II breast cancer about 5 years ago, underwent a routine colonoscopy 3 years later. The colonoscopy revealed multiple colon polyps, one of which showed malignant transformation within the category of stage 1 colon cancer. Because she was diagnosed with 2 cancers, the patient was inquisitive about prevention of recurrence of cancers and apparently had read that vitamin A plays an important role in prevention of cancers. Therefore, in order to get the “required amount of vitamin A,” she started consuming about 20 carrots daily and, after about 1½ years, noticed her skin had become yellowish. She denied

any fever, itching, malaise, and weight loss, or any symptoms of hypothyroidism such as cold intolerance. On examination, her oral mucosa and skin were yellowish, including her palms (Figure 1), but her conjunctivae were spared (Figure 2). She did not have stigmata of hypothyroidism or anorexia. Laboratory work revealed normal complete blood count with no evidence of hemolysis, and the liver function test results and vitamin A, thyroid-stimulating hormone (TSH), and beta-carotene levels were within the normal ranges. Subsequently, the patient was advised to avoid consuming carrots excessively, and after approximately 2 months her yellowish discoloration subsided completely.



Figure 1. The patient's palms on examination, showing the yellowish skin. (See colour version of this figure online at www.informahealthcare.com/cot)



Figure 2. The patient's conjunctivae on examination. (See colour version of this figure online at www.informahealthcare.com/cot)

Discussion

This case demonstrates a typical case of carotenemia where the patient shows yellowing of the skin, especially the palms and soles, but sparing of the sclera, enabling it to be distinguished from jaundice. In dietary carotenemia, elevation in serum vitamin A level is often noticed, but hypervitaminosis A is rarely observed; this is probably because the conversion of vitamin A from carotenoids is tightly regulated. Even though diet-induced carotenemia is a benign condition, non-diet-induced forms of carotenemia have been shown to be associated with more serious conditions, such as anorexia nervosa, hypothyroidism, liver disease, and diabetes mellitus.

It is also important to notice how the media, in giving health information, has misled the public. A number of studies have questioned the effect of vitamins and trace elements in the prevention of cancer [1,2], though some have shown the benefit [3]. However, there has been hardly any literature to support vitamin A's role in the prevention of cancer; instead, vitamin A

has been shown to be associated with increased risk of lung cancer [4,5]. This also signifies the importance of effective communication between the patient and health professionals in making the final decision on using vitamins and herbal medicine, as most of the literature expresses the belief that the information given by the media is quite misleading [6].

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Declaration of interest

The authors declare that there are no conflicts of interest.

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