

IMAGES IN MEDICINE

Hypercarotenaemia

A 52-year-old man presented with yellow–orange discoloration over the palms and soles (Fig. 1), extending to involve the whole body, without affecting the sclera or mucous membranes. His liver and thyroid function studies were normal. On a closer scrutiny of the diet, it was noted that this patient was on a very low-calorie, high-protein diet (Optifast; Novartis) and was consuming food that had a high content of paw-paws. A clinical diagnosis of hypercarotenaemia was made and the pigmentation was attributed to the rapid weight loss, leading to release of carotenes from fat stores, in combination with the high intake of carotenes from paw-paws in the diet.¹

Carotenoids are pigments of amorphous solids or crystals in plant cells that are responsible for the yellow and orange colour of fruits or vegetables. Carotenaemia is a harmless condition that is not associated with any long-term complications. Carotenes are converted to vitamin A and provide the major source of dietary vitamin A. Other causes of hypercarotenaemia, such as diabetes mellitus, hypothyroidism, anorexia nervosa, liver disease, kidney disease, hyperlipidaemia and porphyria need exclusion. In addition to surplus carotene consumption, excess ingestion or percutaneous absorption of chemicals such as quinacrine, saffron, mepacrine, lycopene (from tomatoes) and dinitrophenol should be considered.²

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Figure 1 Yellow-orange discoloration of hand and normal shown for comparison.

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References

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