

You Are What You Eat – A Case of Benign Skin Jaundice

Category: Medicine & Medical Specialties; Poster Presentation

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Introduction:

Death rates from liver disease increased an average of 50% from 2000 to 2015. It is no doubt that the liver is an indispensable organ of the human body. Therefore, abnormalities in liver tests must be taken seriously in order not to miss a potentially fatal process.

Case Presentation: A 61 year old Korean female with PMHx of hypothyroidism c/o skin jaundice, loose stools, and LLQ abdominal pain for 4 days, fatigue for 1 month. Physical exam revealed an alert, well-appearing woman with yellow hands, palm, face, chest, and abdomen, non-icteric sclera, and mild epigastric/periumbilical tenderness. Labwork showed normal TSH, CMP, coags, UA, CBC, HIV and Hep B. Patient's diet consisted of many fruits and vegetables such as yellow squash, beets, and persimmon.

Final Diagnosis:

Jaundice usually depicts hyperbilirubinemia, and is one of the physical exam findings of potential liver failure. In the case of this patient, she did not have hyperbilirubinemia, but instead hypercarotenemia. A good history and physical exam can distinguish a pathological process from benign hyperpigmentation of the skin. Hypercarotenemia spares the eyes, so there will be no scleral icterus, whereas serum bilirubin levels greater than 3 mg/dL would typically cause peripheral yellowing of the eye sclera and skin jaundice.

Pigmented fruits like squash, carrots, sweet potatoes, and beets are high in beta-carotene. They can cause yellow discoloration due to excess beta-carotene in the blood, especially in those with lighter skin. In those with darker skin, this may present only as orange discoloration of palms and soles. This finding has also been associated with certain diseases such as diabetes mellitus, hypothyroidism, liver failure, and anorexia nervosa. In this patient, she had no chronic disease, and required no follow up for her condition. Her skin returned to normal in about 2.5 weeks after reducing intake of pigmented fruits.

Conclusion:

The annual cost of advanced liver failure averages \$39,000/patient depending on the presence of cirrhosis. Liver disease can easily be captured by basic labwork and simple imaging such as liver ultrasound. Hence, it may be worthwhile to screen for secondary causes in all patients with jaundice depending on the clinical judgement.

Learning Objectives

At the end of the poster presentation, audience should be able to

- 1) Distinguish between hyperbilirubinemia nad hypercarotenemia.
- 2) Name three foods that are high in beta-carotene
- 3) Name three conditions that are related to jaundice