

Abstract

J Eur Acad Dermatol Venereol. 2010 Nov 4. doi: 10.1111/j.1468-3083.2010.03888.x.

Skin carotenoid levels in adult patients with psoriasis.

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BACKGROUND: Psoriasis is an inflammatory disease that not only affects the skin but can also have systemic implications such as obesity and nutritional deficiencies. Carotenoids are vitamin A provitamins with anti-oxidant properties that are present in human tissues including skin.

OBJECTIVES: To determine whether psoriasis is associated with lower levels of skin carotenoid levels.

METHODS: In this cross-sectional study, skin carotenoid levels were measured on the palms of 44 patients with psoriasis and 72 patients without psoriasis. A linear regression model was used to evaluate the relationship between psoriasis and carotenoid levels (primary aim) and to determine if severity of disease was associated with carotenoid levels (secondary aim). Potential confounders included demographic factors, smoking status, body mass index and multivitamin intake.

RESULTS: The mean carotenoid levels in the psoriasis and no psoriasis groups were respectively 22 099 and 29 180 and presence of psoriasis was found to be significantly related to lower levels of carotenoids in both univariable and multivariable analysis ($P < 0.05$). In the psoriasis group, the Psoriasis Area and Severity Index score was not significantly related to carotenoid levels ($P = 0.07$).

CONCLUSIONS: Patients with psoriasis appear to have lower skin carotenoid counts than patients without psoriasis.

PMID: 21054574