In contrast to the findings of Carrera et al, in our study, staining with HMB-45 was stronger in the unprotected halves compared with the protected halves (Figure). This is in concordance with the results reported by Tronnier et al.

In summary, we extend the dermoscopic findings observed by Carrera et al into the field of solar-simulated UV radiation, and we agree that not all UV-induced changes are confined to unprotected areas. Additional studies have to be conducted to elucidate this (unexpected) observation.

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Accepted for Publication: December 12, 2012.
Published Online: May 8, 2013.

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Conflict of Interest Disclosures: None reported.

Funding/Support: This project was supported by an unrestricted research grant from Beiersdorf AG, Hamburg, Germany.

Additional Contributions: We thank Volker Wendel and Heiner Gers-Barlag, Beiersdorf AG, Hamburg, Germany, for their help and support in determining the emission spectra of the solar simulator radiation equipment.


Posterolateral Neck Texture (Insulin Neck):
Early Sign of Insulin Resistance

Acanthosis nigricans (AN) is so closely linked with insulin resistance (IR) that it has been called a clinical surrogate for laboratory-determined hyperinsulinemia. The presence of AN can therefore indicate patients with IR, allowing implementation of interventions that may prevent progression to type 2 diabetes mellitus. We report 30 patients who presented with elevated body mass index (BMI, calculated as weight in kilograms divided by height in meters squared) to correlate IR with different AN physical findings.

The homeostasis model assessment of insulin resistance (HOMA-IR) is widely used as an index of IR based on serum fasting glucose and insulin values: HOMA-IR = (glucose (mg/dL) × insulin (mIU/mL))/405. Esteghamati et al determined that IR is present in nondiabetic individuals if HOMA-IR is greater than 1.775.

Methods | Patients presenting to a private dermatology practice between September 2010 and February 2012 with BMI of at least 25 and with acrochordons or signs of AN, specifically hyperpigmentation and/or hyperkeratosis of the neck and/or axilla, were asked to participate in the study. Digital photographs of the neck and axilla were acquired, along with a patient history containing age, sex, race, BMI (using preexamination height and weight measurements), and personal and familial history of adult-onset diabetes mellitus. Fasting serum glucose and insulin values were obtained by means of glucose testing at an external testing site. The presence or absence of visible posterolateral neck pigment and/or texture and visible axillary pigment and/or texture were subsequently assessed from the photographs by 2 observers (W.V.S. and R.K.R.). This protocol was approved by the Phelps County Regional Medical Center institutional review board (Rolla, Missouri), in accordance with the Belmont Report.

Figure 1. Physical Findings for Acanthosis Nigricans

Neck texture has higher sensitivity and odds ratio for the homeostasis model assessment of insulin resistance than neck pigment or axillary texture and pigment. Sensitivity indicates percent of insulin resistance with acanthosis nigricans finding. Specificity indicates percent of non-insulin resistance without acanthosis nigricans finding.
Results | Demographic characteristics for the 30 patients completing the study were as follows: 20 female (67%); median (range) age, 50 (21-68) years; 28 were white (93%), 1 African American (3%), and 1 Native American (3%); median (range) BMI was 39.5 (28.1-67.0); 25 had IR (83%); none had diabetes mellitus; and 20 patients had a family history of diabetes mellitus (67%).

The median (range) fasting serum insulin level was 18.5 (<2-86) μIU/mL (to convert to picomoles per liter, multiply by 6.945); HOMA-IR was greater than 1.775 for 25 of 30 patients (83%). Median (range) HOMA-IR was 4.2 (<0.5-17.8). Postero-lateral neck texture had the highest sensitivity (96%) and odds ratio (17.3) for IR compared with neck pigment or axillary tex-
ture and pigment (Figure 1). Twenty-seven patients had neck texture, 21 had neck pigment, 23 had axilla texture, and 18 had axilla pigment.

Discussion | Our study used visible rather than palpable neck texture because we found visible texture grading to be more reproducible. Consensus was obtained for all visible neck and axillary features, but Burke et al.² have noted that reproducibility of palpable texture was limited (κ≤0.68). In our study also, neck texture was determined to be the most sensitive marker: 8 patients with elevated HOMA-IR showed neck texture change without pigment change. Puri et al.³ found hyperkeratosis (thickened stratum corneum) to be the most common histopathological feature of AN: all AN lesions in that study exhibited hyperkeratosis, whereas 90% exhibited papillomatosis (histopathologic equivalent of wartiness). The use of visible neck texture as an indicator of AN is advantageous because the visible roughness of the neck is recognizable without touching the skin or requiring the patient to disrobe, affording an instant assessment of AN. Texture grading also avoids possible confounding by sun-induced pigmentation. Thus, neck texture exhibits both greater sensitivity and specificity than neck pigment for AN detection.

This study clinic’s patient population was approximately 92% white, limiting the application of our results to other populations. With HOMA-IR varying among populations,⁴ there is no agreement on HOMA-IR cutoffs. Accordingly, the most sensitive among suggested HOMA-IR cutoffs was used in this study.⁵

Results of this study confirm those of Stuart et al.,¹ who found IR in 93% to 99% of patients with AN of the neck. Kong et al.⁶ stated that AN was most difficult to detect in fair-skinned persons, indicating the need for measures with greater sensitivity in these persons. The use of neck texture, rather than pigment on the neck or other anatomic locations, yields this increased clinical sensitivity. Although many physicians observe the axilla to determine AN, 4 patients with IR would have been missed with only axillary observation (Figure 2). Because neck texture is the most sensitive finding for AN, we propose the term insulin neck for this finding. All patients with elevated BMI should be examined for insulin neck.

This research report has 3 take-home points for the clinician:
1. Insulin neck (visibly increased texture on the posterolateral neck) is the most sensitive physical finding for IR.
2. Insulin neck appears as visible lines and/or furrows and ridges on the posterolateral neck.
3. If neck texture is normal, IR is less likely to be present.

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Conflict of Interest Disclosures: None reported.

Additional Contributions: David Klachko, MD, Department of Endocrinology, University of Missouri School of Medicine, who taught his students to perform a careful physical examination, inspired this study. Kristen Hinton, BS, assisted in enrolling patients for this study.


Attitudes and Perceptions of School-Aged Children T

oward Alopecia Areata

Although not life-threatening, alopecia areata (AA) is associated with increased rates of depressive symptoms and anxiety in children.¹ This study investigates how schoolchildren, from kindergarten (K) through grade 8, perceive those with AA and the associated social ramifications.

Methods | After receiving institutional review board approval, we developed a study participant group of 123 school children, grades K through 8, separated by grade. Half the subjects were interviewed as individuals and half as pairs, and all were shown a photograph of a child with AA (Figure). The investigators observed and recorded the initial subjects’ reactions. Responses to a series of questions regarding their attitudes toward the photograph were analyzed to assess differences in children’s attitudes toward those with AA across grade level, sex, and interview format.