Acanthosis Nigricans

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Acanthosis nigricans is thickened, velvety, hyperpigmented skin associated with a variety of endocrine disorders, malignancies and medications.

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Acanthosis nigricans (AN) is a diffuse, symmetric, velvety thickening and hyperpigmentation of the skin, usually appearing in the axillae, neck and other body folds (Figures 1 and 2). Its cause may be related to heredity, endocrine disorders, obesity, drug administration and malignancy. It usually has an insidious onset, the first visible change being a darkening of pigmentation. Over time, affected skin becomes leathery, warty or papillomatous. The skin may actually appear dirty. Epidermal changes may result from hypersecretion of pituitary peptide, or the non-specific growth-promoting effect of hyperinsulinemia. Acanthosis nigricans is classified into 5 types.

Type 1: Hereditary Benign AN

Hereditary Benign AN is a rare autosomal dominant form with onset during childhood or puberty. There are no associated endocrine disorders.

Type 2: Benign AN

Benign AN is associated with a variety of endocrine disorders: insulin-resistant diabetes mellitus, hyperandrogenic states, acromegaly/gigantism, Cushing’s disease, hypogonadal syndromes with insulin resistance, Addison’s disease, and hypothyroidism.

Type 3: Pseudo-AN

Pseudo-AN is a complication of the insulin resistance associated with obesity. It is often associated with multiple skin tags in body folds.

Type 4: Drug-induced AN

Implicated medications include nicotinic acid in high dosage, stilbestrol in young males, glucocorticoids, diethylstilbestrol/oral contraceptives, and growth hormone.

Type 5: Malignant AN

Malignant AN is associated with adenocarcinomas of the gastrointestinal and gyni-
tosis. Mucous membranes and mucocutaneous junctions are commonly involved.

**DIAGNOSIS**

The diagnosis is clinical, and laboratory studies may show elevated glucose values, high levels of circulating insulin, and impaired response to exogenous insulin. The differential diagnosis may include confluent and reticulated papillomatosis (Gougerot-Carteaud Syndrome), pityriasis versicolor, X-linked ichthyosis, and retention hyperkeratosis.

**TREATMENT**

Treatment is guided by the underlying disorder. Lesions are usually asymptomatic; if not, relief has been afforded with use of topical moisturizers such as Lac-Hydrin, or retinoic acid. Pseudo-AN may actually regress with weight reduction.

**CAVEATS**

1) Acanthosis nigricans is a cutaneous marker of tissue insulin resistance and is most commonly associated with obesity and diabetes mellitus.
2) Sudden and rapid onset of extensive acanthosis nigricans should mandate evaluation for internal malignancy, most commonly gastric carcinoma.

**REFERENCES**