

## Acanthosis nigricans: A social morbidity

Colors have fascinated humans since ancient times. The drift from B/W cell phones to retina display macbooks is a testimonial to this fact. In the past, men with different colors have been graded as superior or inferior. Skin is one of the most important components of an individual's

physical appearance. We may be advancing toward a world where skin color is seen simply as a descriptor rather than a defining factor for an individual, but people who are differently or abnormally colored (hypo or hyperpigmentation) still face severe psycho-social problems. Golfman<sup>[1]</sup> defined stigma as “an attribute that is deeply discrediting, that reduces a bearer from a whole and usual person to tainted, discounted one.” Both hyperpigmentation and depigmentation are associated with stigma.

Acanthosis is diffuse epidermal hyperplasia (thickening of the skin). It implies increased thickness of the Malpighian layer (stratum basale and stratum spinosum). Nigricans is a brown to black, poorly defined, velvety hyperpigmentation of the skin.

Acanthosis nigricans (AN) was identified in 17% of the children/adolescents and in 21% of the adults. For both age groups, the more type 2 diabetes risk factors that were present, the higher the prevalence of AN ( $P < 0.001$ ). In patients with AN, the prevalence ratio for type 2 diabetes was 1.97 (95% confidence interval, 1.18–3.27;  $P = 0.01$ ), after controlling for age, body mass index, and the number of type 2 diabetes risk factors.

AN can develop as a consequence of obesity, hyperandrogenism, and obesity-related insulin resistance. It is sometimes associated with an underlying syndrome or hormone problem such as polycystic ovary syndrome, Cushing's syndrome, acromegaly, and hypothyroidism. Adolescence is an age period, in which physical changes and appearance occupy an important place in the self-image of an individual. More than being thought of as a medical problem, AN is often regarded as something which is socially unacceptable owing to the presence of unsightly pigmented patches in the body folds, such as the posterior and lateral folds of the neck, the armpits, groin, navel, forehead, and other areas. For this reason, acanthosis may predispose to negative psychosocial consequences in an adolescent. Several evidence-based studies have shown that obese teens have a higher incidence of mental health problems such as depression, anxiety, and poor self-esteem than their nonobese peers.<sup>[2]</sup> Self-esteem, as an overall reflection of an individual's self-worth, encompasses beliefs about oneself as well as an emotional response to those beliefs.<sup>[3]</sup> Representing the capacity to feel worthy of happiness and to be able to successfully address life challenges, self-esteem is an important determinant of adolescents' mental health and development.<sup>[4]</sup> No treatment of choice exists for AN. Topical medications that have been effective in some cases include keratolytics (e.g., topical tretinoin 0.05%, ammonium lactate 12% cream, or a combination of both) and triple combination depigmenting cream (tretinoin 0.05%, hydroquinone 4%, and fluocinolone acetonide 0.01%) nightly with daily sunscreen. Oral agents that have shown some benefits

include etretinate, isotretinoin, metformin, and dietary fish oils. Hyperandrogenemia, insulin resistance, and AN syndrome patients may be treated with oral contraceptives and metformin.<sup>[1]</sup>

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#### Conflicts of interest

There are no conflicts of interest.

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