

Clinical case blog

Title: Acanthosis Nigricans

Alexander K. C. Leung^{1*} and Benjamin Barankin²

¹University of Calgary, Pediatric Consultant, Alberta Children's Hospital, Canada

²Medical Director and Founder, Toronto Dermatology Centre, Canada



An 8-year-old black girl presented with thickening and hyperpigmentation of the skin over the nape of approximately 2 years duration. Her mother thought that the child's skin was dirty but that the "dirt" could not be removed despite of all her efforts. The child was otherwise healthy and was not on any medication. There was no family history of endocrinopathy or any similar skin disorder. Physical examination showed that the skin over the nape was hyperpigmented, thickened and velvety. She was overweight with a height of 127 cm (50th percentile) and weight of 40.5 kg (5.5 kg above the 97th percentile). This patient has acanthosis nigricans that is characterized by dark, velvety thickening of the skin. The prevalence is approximately 7% in children. The disease tends to be more common in dark-skinned persons. There is no sex predilection. Childhood acanthosis nigricans is most commonly caused by obesity. Endocrinopathies, such as insulin resistance, diabetes mellitus, polycystic ovary disease, ovarian hyperthecosis, pineal hyperplasia or pinealoma, acromegaly, hypothyroidism, Addison disease, and Cushing disease, have been associated with the development of acanthosis nigricans. Acanthosis nigricans may be induced by systemic corticosteroids, estrogens (such as diethylstilbestrol), oral contraceptives, nicotinic acid, and fusidic acid. Acanthosis nigricans may also be inherited as an autosomal dominant trait with variable penetrance. Acanthosis nigricans has been reported to be associated with many different syndromes including Hirschowitz syndrome, Lawrence-Seip syndrome, Bloom syndrome, Rud syndrome and Rabson-Mendenhall syndrome. Acanthosis nigricans may also be idiopathic. Routine blood work, particularly looking for diabetes and thyroid dysfunction should be considered. Weight loss can improve the appearance of acanthosis nigricans if there is associated obesity, as can the use of topical retinoids, lactic acid, urea, topical steroids or a combination of them.

*Corresponding author: Alexander K.C. Leung, #200, 233 – 16th Avenue NW, Calgary, Alberta, Canada T2M 0H5; Tel: (403) 230-3322; E-mail: aleung@ucalgary.ca

Copyright: © 2014 Leung, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.