



PIGMENTATION

ACANTHOSIS NIGRICANS IN CHILDREN IS A MARKER OF IMPENDING METABOLIC SYNDROME

Ranthilaka R. Ranawaka⁽¹⁾ - Sivadarshiya Pathmanathan⁽²⁾

Dermatology, General Hospital Kalutara, Kalutara, Sri Lanka⁽¹⁾ - Endocrinology Unit, General Hospital Kalutara, Kalutara, Sri Lanka⁽²⁾

Introduction: Benign acanthosis nigricans (AN) is associated with obesity and/or insulin resistance. It has been documented in up to 7% of children, mainly in the teenage years.

Metabolic syndrome is a cluster of conditions; increased blood pressure, high blood sugar, excess body fat around the waist, and abnormal cholesterol or triglyceride levels, that occur together, increasing risk of heart disease, stroke and diabetes.

This study aims to determine whether easily observable AN can be used to screen for metabolic syndrome in children.

Methods: The subjects who developed AN in childhood who consented to participate were included. Physician's global assessment(PGA) of severity of AN, height/weight measurements, waist/hip circumference, OGTT for fasting and 2hour plasma glucose, liver transaminases and lipid profile were performed.

Results: 60 subjects were studied prospectively over 12 months, age ranged from 9-21 years; Male:Female ratio of 19: 41. Presenting complaints were pigmentation(n=24), obesity(n=10), irregular menses(n=9), gynaecomastia(n=4), acne(n=7) and hirsuitism(n=6).

Except one child with only facial acanthosis, all had classical AN of the neck with other areas in varying degrees. Severity of AN of the neck ranged from PGA 2 to 9.5, average being 6.57.

19.4% subjects were within normal BMI while 30.6% and 50% were overweight and obese respectively. Considering waist/hip ratio 33% men and 67% women had abdominal obesity. Two had high BP; while impaired OGTT in 14.3%, diabetes in 17.8%, high total and LDL cholesterol in 40% and 53.3% respectively, high triglycerides in 23.3%. Elevated liver transaminases detected in 60.7%; where grade I and grade II fatty liver were detected ultrasonically in 39.2% and 32% respectively. 29.6% of female had polycystic ovaries. In this study sample 80% were detected ≥2 metabolic derangements.

Conclusions: AN is not merely a pigmentory problem in children, and is a cutaneous marker of impending metabolic syndrome.





