

Insulin suspension isophane/insulin

Acanthosis nigricans: case report

A 14-year-old boy developed acanthosis nigricans during treatment with insulin suspension isophane/insulin [biphasic isophane insulin].

The boy, who had type 1 diabetes mellitus, needed to control his raised blood sugar levels. Therefore, he presented to an outpatient department. He was receiving biphasic isophane insulin, consisting of insulin suspension isophane 70% and insulin 30%, in doses of 30–55 IU before meals. Upon examination, he had an elevated and well-defined plaque over the right side of his abdomen. The plaque was non-tender and located right above the umbilicus. It was hypertrophic and hyperpigmented with a verrucous texture. He recalled that the lesion had developed 3 years prior as a raised pigmented area. For the last 4 years, he had been injecting insulin suspension isophane/insulin into this area exclusively. Although he had been advised to rotate his injection sites, he used this area of thickened skin because he felt less pain there. Histopathologic evaluation of the area showed hyperkeratosis, acanthosis, papillomatosis and a thickened dermis.

The boy was diagnosed with exogenous insulin-derived acanthosis nigricans. He was advised to rotate his injection site regularly. In the ensuing weeks, his diabetic control improved. He also had amelioration of polydipsia and polyuria symptoms. His insulin requirement decreased to 25–30 IU of insulin suspension isophane/insulin. At last follow-up, his plaque had resolved slightly with decreased thickness and pigmentation.

Author comment: "*Acanthosis nigricans is a cutaneous manifestation of insulin resistance. We herein present a case of localized acanthosis nigricans*".

Dhingra M, et al. Exogenous insulin-derived acanthosis nigricans: Could it be a cause of increased insulin requirement?. *Dermatology Online Journal* 19: [3 pages], No. 1, Jan 2013 - India 803083410