

Lichen Sclerosis et Atrophicus May be Associated with Prediabetes

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Abstract

Objective: In obese young patients with prediabetes, intramyocellular and intraabdominal lipid accumulation is closely linked to the development of severe peripheral insulin resistance. Skin diseases have been associated with insulin resistance such as acanthosis nigricans, skin tags, acne, psoriasis, hidradenitis suppurativa, androgenetic alopecia and hirsutism. Hyperinsulinemia activates insulin growth factor-1 (IGF-1) receptors located in fibroblasts and keratinocytes and thereby stimulating their proliferation.

Case: 19 year old male patient was referred to endocrinology department for violaceous striae. On physical examination there were linear striae (for 2 years) localized on abdominal area, and brown patches and depigmented maculas on lateral trunk and neck areas (for 12 years). BMI was 30 kg/m². There was no history of any medication including steroids. Laboratory findings: fasting blood glucose: 89

mg/dl (70-99), creatinine: 0.77 mg/dl (0.72-1.25), ALT: 47 (0-54), insulin: 15.7 µIU/ml (0-29), morning cortisol: 13.2 µg/dl (4.3-22.4), ACTH: 24.7 pg/ml (0-46), and cortisol after 1 mg dexamethasone suppression test: 0.7 µg/dl, OGTT 0. hour: 101 mg/dl, 2. hour: 165 mg/dl, HOMA-IR: 3.45. HbA1c: 6. Punch biopsy specimen (0.2 cm) was taken from lesions and he was diagnosed with lichen sclerosis et atrophicus.

Conclusion: Skin is the largest organ of human body, and endocrinological disorders may present with skin lesions before the disease itself becomes more obvious for diagnosis. We diagnosed both IFG and IGT in a patient presenting with a combination of three unusual skin lesions, vitiligo, striae and lichen sclerosis et atrophicus. These skin lesions should be evaluated for diabetes in clinical practice.

Keywords: Lichen sclerosis et atrophicus, prediabetes, obesity