

OBSERVATIONS

Psoriatic Exacerbation Associated With Insulin Therapy

We report the case of a 70-year-old male who presented with worsening psoriasis after initiating insulin therapy.

The patient, who had a 25-year history of type 2 diabetes with no complications and an A1C of 7.8%, took metformin for 20 years with stable umbilical psoriasis. He did not require psoriatic therapy before initiating insulin therapy.

In December 2006, the patient transitioned to glargine injections for a rising A1C. Two weeks later, psoriasis erupted on his abdomen and legs. He continued on glargine with persistent symptoms until a dermatology consultant began hydrocortisone cream in March 2007. He discontinued glargine in August 2007 with partial resolution and was transitioned to Neutral Protamine Hagedorn (NPH) insulin. Another, similar eruption occurred within one week. Again, his psoriasis abated after NPH was discontinued. Glargine was reinitiated in November 2007, and, again, his psoriasis worsened, this time affecting his abdomen, back, and neck.

The patient reported a history of hypertension and hypercholesterolemia. Medications he was taking included timolol, isosorbide mononitrate, valsartan,

atorvastatin, and aspirin. He was a retired policeman who quit smoking in 1997 and imbibed alcohol weekly. Family history was significant for type 2 diabetes and psoriasis in multiple family members. Examination revealed a well-appearing man weighing 153 lbs (21 kg/m²). Irregularly distributed plaques of erythema, on a scale ranging from 1–3 cm, covered the torso and extremities. Skin biopsy was consistent with psoriasis. He transitioned off insulin and restarted metformin. His psoriasis slowly abated while off insulin therapy.

Elevated endogenous insulin levels have been associated with psoriatic exacerbation before, as in the case of a 56-year-old woman diagnosed with an insulinoma (1). Insulin-related psoriatic exacerbation has biological plausibility because insulin has mitogenic effects through insulin receptor signaling and insulin's binding to the insulin-like growth factor receptor, a ubiquitous receptor that promotes cell growth and keratinocyte proliferation, attachment, and migration (2). Growth hormone also has insulin-like properties and has been reported to cause psoriatic exacerbations (3). Other diabetes medications, including metformin (4) and glibenclamide (5), have also been associated with psoriatic exacerbations. While a similar effect of an insulin secretagogue is not surprising, its appearance after initiation of an insulin sensitizer remains unexplained.

In summary, we present a report of psoriatic exacerbation following insulin therapy. Insulin, other anabolic hormones including growth hormone, and certain hypoglycemic agents are important causes of worsening psoriasis.

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