Introduction

Pityriasis rubra pilaris (PRP) is a chronic disorder of keratinization of unclear pathogenesis [1]. It typically manifests as erythematous and scaly cutaneous plaques with islands of spared skin associated with follicular scaly papules and orange palmar and plantar keratoderma.

Although PRP is usually idiopathic, certain trigger events have occasionally been reported, mainly traumatic, infectious (infections of streptococcus, cytomegalovirus and rubella) or after vaccination [2]. However, PRP-like eruptions induced by drugs have been described, albeit rarely [3-5].

We report a case of PRP-like eruption that occurred during the initiation of insulin therapy. To our knowledge, no previous similar cases have been reported.

Case report

A 29-year-old man was referred to our department because of a generalized erythematousquamous and non-pruritic der-
Histopathology

A skin biopsy was performed, and histopathological examination revealed irregular hyperkeratosis with orthokeratosis and parakeratosis in addition to dilated hair follicles and keratinous plugs (Figure 3).

Diagnosis and outcome

A diagnosis of a PRP-like eruption, possibly induced by insulin therapy, was suspected. Insulatard® and Actrapid® were discontinued and the patient was switched to insulin analogue therapy: glargine (Lantus®) and glulisine (Apidra®). Skin lesions were treated with betamethasone ointment (30 g daily) and petrolatum. A progressive resolution of the rash was obtained and complete healing of all cutaneous lesions was achieved after two months. Skin tests (patch test and intradermal test) with insulin and its additives were considered but the patient refused them. No recurrence of skin lesions was seen after one year of follow-up.

Discussion

The acute onset of the dermatosis after insulin therapy initiation, the rapid favorable outcome after human insulin withdrawal, as well as the absence of recurrence after one year of follow-up, were suggestive of a possible responsibility of insulin therapy for the genesis of the PRP-like eruption in our patient. Although possible, a fortuitous association “insulin therapy—idiopathic PRP” seems unlikely in our case because of the rapid resolution of the rash, as opposed to the classical chronic course of idiopathic PRP, even with the use of systemic treatments, such as retinoids [1].

Drug-induced PRP-like eruptions are rare, and the mechanisms leading to their occurrence have not been clearly elu-
cidated [2-5]. The pathogenesis in our patient is also unclear. Although insulin therapy is largely used worldwide, its association with PRP-like eruptions has never been reported. However, since PRP may occur in certain cases with underlying immunological anomalies [2], it is possible that diabetes mellitus type I might have contributed to the development of the dermatosis in our patient, after insulin therapy initiation.

Insulin preparations containing zinc or protamine (such as Insulatard®) may also cause a delayed-type hypersensitivity [6,7]. However, in the absence of skin tests, the role of such additives in the genesis of the dermatosis in our patient could not be determined.

Conclusion

Although a fortuitous association could not totally be ruled out, a cutaneous reaction induced by insulin therapy in a context of underlying immunological anomalies might be the cause of the dermatosis in our patient.

References

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