Erythrokeratodermia variabilis: Successful palliative treatment with acitretin

Sir,

Erythrokeratodermia variabilis (EKV) is a rare autosomal dominant genodermatosis which is characterized by the coexistence of hyperkeratotic plaques and transient erythematous patches. Irregular, variably shaped erythematous macular patches may enlarge or regress over time. Concurrently, there are persistent, well-demarcated, geographic, hyperkeratotic plaques which are distributed on the face, extensor surfaces, buttocks, trunk, and extremities.[1-3] A few clinicians have previously reported that acitretin treatment is effective.

We herein report successful use of acitretin in a patient with EKV.

A 22-year-old woman presented to our dermatology outpatient clinic with a history of generalized erythematous scaly patches and hyperkeratotic plaques. She was born to consanguineous parents, and the lesions had started at the age of a few weeks. Her first female (15-year-old) and male (7-year-old) cousins had a history of similar lesions that started at the age of 6 and 2 months respectively.

Physical examination revealed multiple, irregularly shaped, erythematous scaly macular patches and hyperkeratotic plaques, located on the face, buttock, trunk, and limbs [Figure 1]. These erythematous areas had been noted to change in shape and position over time by the patient and her parents. The eruption was pruritic and getting worse in summer. She had no palmoplantar keratoderma. Scalp, nails, teeth, and mucosa were normal.

KOH preparations and cultures were negative for fungus. A punch biopsy from an erythematous scaly plaque on trunk revealed hyperkeratosis, variable degrees of acanthosis, and perivascular lymphocytic infiltrate in upper dermis and dermal papillae. On the basis of the history and clinical findings, a diagnosis of EKV was made.

Initially the patient was treated with topical corticoid ointment and 4% urea emulsion twice daily for 4 weeks, but no improvement was seen. Thereafter, treatment with acitretin 35 mg/d (equivalent to 0.5 mg/kg) was initiated. Four weeks later, her lesions had become more pruritic and she complained of xerosis due to acitretin therapy. The dose was then reduced to 25 mg/d, which she continued for 5 months. Tablet loratadine 10 mg/d and 4% urea emulsion twice daily were added to the therapy, after which the patient tolerated the treatment very well. A moderate improvement was observed at the end of the third month of therapy. Monthly checks of complete blood count, liver function, and serum lipids were normal throughout acitretin treatment period. Acitretin dose was reduced to 10 mg/d after 6 months and continued for an additional 3 months. Seven months after initiating the treatment, the patient's skin remained lesion free [Figure 2]; and the therapy was stopped at the ninth month of treatment. The therapy was discontinued, followed by a rapid recurrence of the EKV lesions within 2 weeks. Intermittent treatment during the summer months is planned.

EKV, described by Mendes da Costa in 1925, is a rare autosomal dominant genodermatosis that usually appears within the first year of life but may arise later in childhood.[1,2] The clinical picture consists of irregularly shaped erythematous patches and hyperkeratotic plaques. The erythema may be accompanied by some fine scaling. Geographic, hyperkeratotic plaques are usually persistent, but the erythematous component may change in shape and position over time.[2,3]

The histopathological findings of EKV are nonspecific; the diagnosis depends on the clinical features and family history. Under light microscopy, nonspecific hyperkeratosis with variable degrees of acanthosis, papillomatosis, parakeratosis, and mild perivascular lymphocytic infiltrate is seen.[2]

Emollients, topical retinoic acid, 5% lactic acid, intralesional steroids have been used in the therapy of EKV. Treatment of EKV with oral etretinate and isotretinoin has been well documented in the literature.[4,5] To our knowledge, only 2 case reports of successful use of acitretin in the treatment of EKV have been published.[6,7] van de Kerkhof *et al.* noted sustained improvement using acitretin at the dose of 25 to 35 mg daily, but reduction of dosage resulted in a relapse

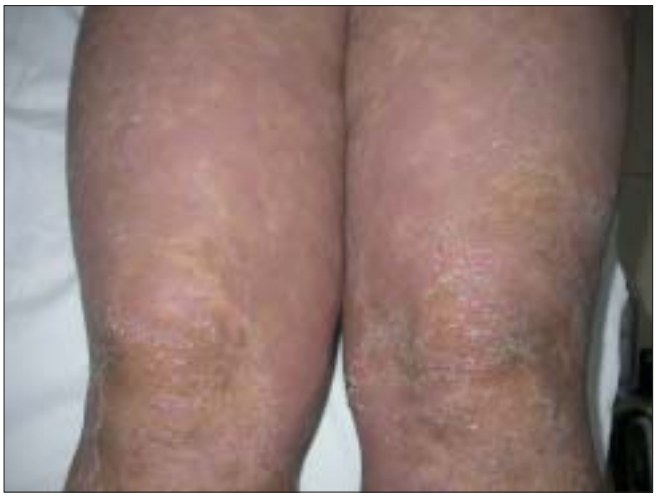

Figure 1: Multiple, irregularly shaped, scaly erythematous patches and hyperpigmented hyperkeratotic plagues on thighs before acitretin treatment

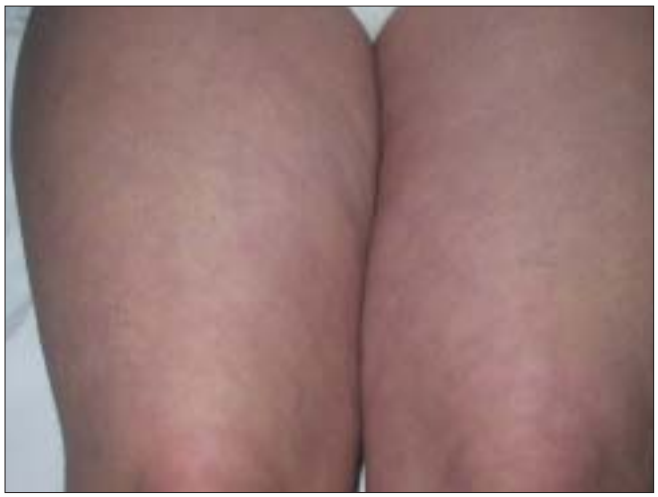

Figure 2: Complete healing of the lesions on thighs 7 months after acitretin treatment

within a few days.[6] Graham-Brown *et al.* reported complete healing of EKV in a 9-year-old girl on acitretin (0.7 to 1 mg/kg/d), which was continued during the summer months. They also noted a rapid recurrence when the therapy was discontinued.[7] We observed a moderate improvement at the third month and complete healing at the seventh month of acitretin therapy, at doses ranging between 35 and 10 mg/d. We also observed a rapid recurrence when the therapy was stopped.

Acitretin is useful in many dermatological disorders characterized by hyperkeratinization. The safety of utilizing acitretin for long periods remains controversial due to its side effects. However, a review of the use of acitretin in children for a cumulative period of 472 months revealed that it is a safe and effective treatment in children with keratinization disorders.[8] It represents a safe and effective treatment, provided minimal effective dose is maintained and side effects are carefully monitored. Intermittent (on-off protocol) acitretin therapy may be used in chronic keratinization disorders.

In conclusion, we may state that we have herein reported the case of a girl with EKV, born to consanguineous parents, whose lesions were successfully treated with acitretin. In treating EKV, acitretin is extremely useful but not curative. Acitretin can be used during the exacerbation periods of EKV, especially in the summer months.

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