Kyrle’s Disease: A Rare Presentation in Diabetic and Hypertensive Patients

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ABSTRACT

Two rare cases of Kyrle’s disease in diabetic patients who presented with papules on legs, back and abdomen, are reported. Pathology of this disease and management are described in detail. Importance of treating the underlying condition associated with this disease is highlighted.

Keywords: Diabetes, Hyperkeratosis follicularis, Kyrle’s disease.

INTRODUCTION

Kyrle’s disease is a rare dermatologic perforating disorder, which is characterized by transepidermal elimination (TEE) of abnormal keratin. It can affect both men and women throughout life, but female preponderance is usually seen. Lesions typically begin as small papules with scales that eventually grow and form red brown nodules with central keratin (horny) plug. Lesions are not painful but cause intense itching. Treatment is directed at the underlying disease. Lesions may self-heal without any treatment, but new lesions usually develop.

CASE REPORTS

Two cases of Kyrle’s disease in a duration of 6 months were reported. One was a 53-year-old male patient who presented with raised reddish skin lesions over both lower limbs, back and abdomen associated with itching since 2 weeks (Figs 1A and B). He was a known case of type II diabetes mellitus and hypertension since 8 years. Biopsy was taken from a single localized papule with keratotic plug on the back, which had been clinically suspected to be acquired perforating dermatosis (APD). Second patient was a 48-year-old female who presented with complaints of recurrent itchy hyperpigmented papules and pustules over upper and lower extremities and trunk since 6 months (Figs 2A and B). She was a known diabetic since 7 years and hypertensive since 4 years. Biopsy was taken from hyperpigmented papule over the left leg. She was also suspected to be a case of APD or atopiform eczema.

DISCUSSION

The perforating disorders comprise a group of disorders sharing the common characteristic of TEE. This phenomenon is characterized by the elimination or extrusion of altered dermal substances and, in some cases, by such material behaving as foreign material. Traditionally, four...
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This rapid production of abnormal keratin forms a plug that acts as a foreign body, penetrating the epidermis and inciting a granulomatous inflammatory reaction. A certain similarity exists between the parakeratotic column in Kyrle’s disease and that observed in porokeratosis of Mibelli. In both conditions, a parakeratotic column forms as a result of rapid and faulty keratinization of dyskeratotic cells, but, whereas in Kyrle’s disease the dyskeratotic cells are often used up so that disruption of the epithelium occurs, and the clone of dyskeratotic cells can maintain itself in porokeratosis Mibelli by extending peripherally. Studies on lectin binding showed that the glycosylation process was impaired in both the epidermis and basement membrane zone of the leisonal skin. In addition, electron microscopic examination revealed diabetic microangiopathy of the dermal blood vessels as well as marked ultrastructural alteration of the dermo-epidermal basal lamina. These findings confirm the association of diabetes mellitus with Kyrle’s disease.

CONCLUSION

Although rare, Kyrle’s disease should be considered in the differential diagnosis of all perforating dermatoses in diabetics. Epidemiological, clinical, and special stains will help in the diagnosis of this disease to provide better patient management. Kyrle’s disease is treated with retinoic acid preparations, salicylic acid, corticosteroids, electrocautery, and cryotherapy. But the main treatment lies in treating the underlying cause. Thus, in case of diabetics, glycemic control can help in alleviating the disease symptoms and prevent recurrence.

REFERENCES