INTRODUCTION

Vitiligo affects all races. It occurs in 1% of the world population. The incidence of vitiligo in those with racially pigmented skin is higher. Between 30-40% of patients have a positive family history. It is one of the disorders commonly associated with Koebner phenomenon. The Koebner phenomenon refers to the development of isomorphic lesions in the traumatized area of normal skin in certain skin diseases. Various forms of trauma are known to trigger the appearance of fresh lesions. We report one such rare trigger/trauma to the skin which led to the Koebner phenomenon in vitiligo.

CASE REPORT

A 14-year-old boy presented to the dermatology out patient department with vitiligo for the past 2 years. Lesions appeared on his forehead and later spread to involve both shins and abdomen. The boy was initially treated with topical betamethasone dipropionate twice daily and topical PUVASOL therapy. Response was slow so he was given intramuscular (intragluteal) injections of triamcinolone acetonide, 40 mg monthly for 3 doses, 6 months ago. For the last 3 months he developed fresh vitiligo lesions on both flanks which on examination showed vitiliginous lesions in striae distensae on both flanks extending onto the thighs (Figure 1). These striae were not present prior to systemic steroid use. There was no history of excessive exercise or obesity. His BMI was 23. There was no evidence of any endocrinopathy.

Biopsy of the lesions revealed slight atrophy of the epidermis with absence of melanocytes from the basal layer along with absence of melanin pigment in the keratinocytes.

The patient was advised against further use of oral or intramuscular steroids and topical steroids on the striae. He was recommended narrow band UVB therapy which the parents declined due to personal reasons so treatment was continued with topical PUVASOL. The lesions in the striae (Figure 2) and on the face improved while those on the shins were slow to respond.

DISCUSSION

The Koebner phenomenon was first described in 1872 by Heinrich Koebner in a patient of psoriasis. Also known as the isomorphic response, it is the development of pre-existing skin disease following trauma to uninvolved skin. Koebner phenomenon has been described in numerous diseases and conditions like vitiligo, lichen planus, warts, molluscum contagiosum and sarcoidosis. Vitiligo has been known to be associated with Koebner phenomenon. It has been described in response to epidermal skin grafting, excoriations, immune therapy of neoplastic disease and pulse dye laser removal of port wine stain. Radiotherapy for carcinoma of the breast, eyebrow plucking with thread and tazarotene induced skin irritation have also been reported to be associated with Koebner phenomenon in vitiligo. More recently, vitiligo

CASE REPORT

Vitiligo Appearing in Striae Distensae as a Koebner Phenomenon

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ABSTRACT

Koebner phenomenon, the appearance of preexisting skin lesions following trauma to previously uninvolved skin, has been seen frequently with vitiligo. The type of trauma leading to Koebner phenomenon can vary from scratching, surgical scars, radiotherapy, burns, irritation from drug use and laser therapy. Striae distensae are a form of injury to the skin and in this particular case resulted from rapid increase in body size at puberty and possibly the use of systemic steroids for the treatment of vitiligo. The appearance of vitiligo in striae distensae as a form of Koebner phenomenon has been reported rarely. We describe a 14-year-old boy with vitiligo for the past 2 years, which Koebnerized in the striae distensae.

Key words: Vitiligo. Koebner phenomenon. Striae distensae.

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Figure 1: Vitiligo lesions in striae distensae over right flank.
Figure 2: Clearance of vitiligo from striae with topical PUVASOL therapy.
has been reported in striae. It illustrates the Koebner phenomenon, whereby depigmentation occurs as a trauma response in patients with vitiligo. The exact pathogenesis of striae is unknown but it relates to changes in the components of the extracellular matrix, including fibrillin, elastin and collagen. It has been proposed that striae are a form of dermal scarring in which the dermal collagen ruptures. The pathology lies in the subdermis, while the overlying epidermis remains normal, except for some thinning and flattening. The pathological changes in vitiligo are in the basal layer of the epidermis so it still remains a mystery as to how a subepidermal condition can initiate the spread of vitiligo. Striae distensae arising at puberty and pregnancy or striae due to glucocorticoids, exogenous or endogenous, are produced due to dermal damage. Vitiligo lesions occur over them as a response to trauma, a manifestation of Koebner phenomenon. However the presently reported case remains a unique case of Koebner phenomenon non induced by steroids. The age of this patient was also close to reaching puberty.

REFERENCES

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