TOPICAL CORTICOSTEROID INDUCED ATROPHIC STRIAE AND TINEA INCOGNITO

K Pavithran

Atrophic striae at the site of prolonged application of fluorinated topical corticosteroids were seen in three patients aged 24, 8 and 26 years respectively. Clinical features of tinea cruris were found masked by topical corticosteroid in one of the patients resulting in tinea incognito.

Key words : Topical corticosteroid, Atrophic striae, Tinea incognito.

Corticosteroid is the most commonly prescribed topical agent in dermatological practice. Over the years, the number and seriousness of adverse effects from these agents have increased pari passu with potency.[1] The reported side effects include contact hypersensitivity, hypopigmentation, hypertrichosis, atrophy, telangiectasia, striae, acne, exacerbation of rosacea, induction of perioral dermatitis, masking of infections, suppression of pituitary-adrenal axis, iatrogenic Cushing's syndrome and glaucoma.[2-15] Here we report topical corticosteroid-induced atrophic striae in three patients. Tinea cruris infection was found masked by corticosteroid in one of them, resulting in tinea incognito.

Case Reports

Case 1

A 24-year-old male developed an asymptomatic, atrophic, linear band on the left groin since one month. He had been applying a skin ointment containing. 0.025% fluocinolone acetonide for pruritic scaly patches on the groins since 4 months. Though there was profound relief of the signs and symptoms on application of the ointment, these recurred on cessation of therapy. So he continued application of the ointment regularly twice daily. There was no history of recent sudden gain or loss of body weight and he had never received oral or parenteral corticosteroids. Examination revealed dusky red, ill-defined patches covered with a few scales, on both the groins extending to the upper part of the thighs on the left side. Within the patch, there was a 5 cm long and 0.5 cm broad shallow brownish-red, depressed band covered with atrophic epidermis (Fig. 1). General physical and systemic examination did not reveal any abnormality.

Fig. 1. Topical steroid induced atrophic striae in a patch of tinea incognito of the left groin (case 1.)

Routine laboratory tests on blood, urine and stools were normal. Blood VDRL was negative. Skin scrapings taken from both groins showed a few mycelia, some of them breaking up into arthrospores. Skin biopsy taken from the atrophic band revealed thinning of the epidermis with decrease in collagen and elastic tissue. The collagen fibres were separated from

From the Department of Skin and VD, Medical College Hospital, Kottayam-686 008, India.

one another and the elastic fibres appeared curled and clumped. On stopping application of the ointment for 2 weeks, the patient developed well-defined, intensely pruritic, erythematous patches on the groins with an active raised border consisting of tiny papules, vesicles and crusts. Skin scrapings in KOH mounts revealed plenty of mycelia. Cul ure of the skin scrapings in Sabouraud's agar yielded growth of *Epidermophyton floccosum*. Topical application of 2% miconazole nitrate oint ment and oral griseofulvin therapy for 3 weeks resulted in complete cure of tinea cruris, though the striae persisted.

Case 2

An 8-year-old girl with a history of bronchial asthma developed multiple pinkish atrophic striae in a bizzare pattern (Fig. 2) on the popliteal and antecubital regions of both sides since 2 months. She had been applying a skin ointment containing 0.64 mg of betamethasone dipropionate per gram since 2 years for lichenified patches of atopic dermatitis at those sites. There was no history of systemic corticosteroid therapy. General physical and systemic examination did not reveal any abnormality except for mild rhonchi and a few crepitations in both lung fields. Routine laboratory tests on blood, urine and stools were normal. Skin scrapings did not reveal any fungal filaments. Histopathological study of the striae showed features similar to those described for case 1. The patient was instructed to apply olive oil locally. The striae were found persisting even at the end of 6 months.

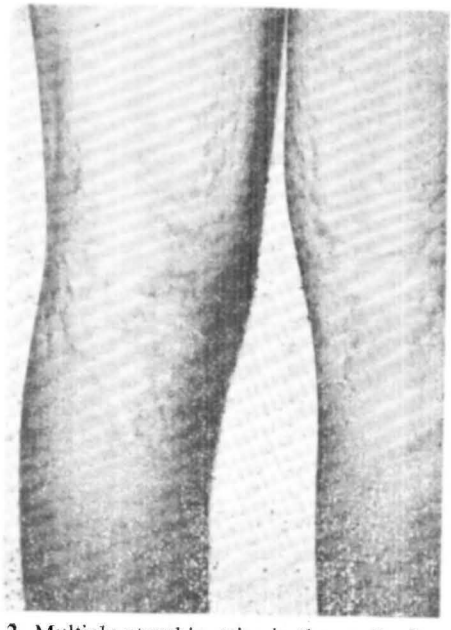

Fig. 2. Multiple atrophic striae in the popliteal region of an 8-year-old girl.

Case 3

A 26-year-old male who had been applying a skin ointment containing fluocinolone acetonide 0.025%, on the groins for the last 2 years, for intertrigo developed multiple linear pinkish atrophic striae since 6 months (Fig. 3). There was no history of systemic corticosteroid therapy. There was no striae elsewhere on the body and the general physical and systemic examinations were normal. Skin scrapings did not reveal any fungal filaments. Routine laboratory tests on blood, urine and stools were normal. He denied consent for biopsy of the skin lesion. Application of 3% quiniodochlor cream for one month cured intertrigo, though the striae persisted.

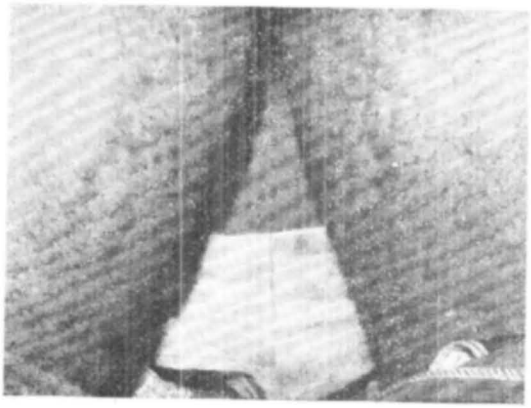

Fig. 3. Multiple atrophic striae of the groins and upper part of thighs.

Comments

Corticosteroid ointments tend to be used as a dermatological panacea and the misuse of these powerful agents is often the cause of commonly observed iatrogenic skin diseases.[11] Atrophic striae occur most commonly over the abdomen, lower back, flanks, breasts, lateral aspects of the thighs and above the knees.[6] Striae were observed in the flexures, in all cases reported here. Increased warmth, inflammation, maceration and close approximation of the skin of the groins enhance penetration of the corticosteroid because the physiological state of the skin at these sites is similar to that which results from occlusive therapy. It is quite unusual to see striae in children below 10 years.[16] One of our patients was aged only 8 years. Mears[17] also observed steroid-induced striae in a 5-year-old child. Epstein et al[6] reported steroid-induced atrophic striae in groins in 5 male patients. The pathological mechanism of topical steroid-induced atrophy is not well understood. It has been suggested that all glucocorticoids inhibit the growth, regeneration and repair of cellular and intercellular components of dermal connective tissue when these penetrate through the skin barrier.[18] This atrophogenic property is more with potent fluorinated corticosteroids than with hydrocortisone.[19] Stevanovic[20] experimentally produced atrophy and telangectasis in 3 normal men after application of fluocinolone acetonide.

In case 1, the characteristic clinical features of tinea cruris were masked by prolonged application of corticosteroid ointment; thus rendering the disease unrecognizable. This is known as tinea incognito. Ive and Marks[11] reported 14 cases of tinea in which steroid application resulted in unusual clinical pictures. Burry[12] also reported cases of steroid modified tinea. Normally, the clinical diagnosis of tinea depends heavily on the inflammatory changes involved. This inflammatory response is totally suppressed by topical corticosteroid. Cessation of corticosteroid therapy for a few days led to unmasking of the disease in our case resulting in appearance of the characteristic clinical features of tinea cruris, and skin scrapings from the groin lesions showed plenty of mycelia.

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