

Erythematous plaques in axillae - a report of two cases

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Abstract Inverse (flexural) psoriasis is characterized by shiny, pink to red, sharply-demarcated thin plaques. Frequency of isolated involvement of these areas is very rare and the morphology is frequently altered by maceration and friction. All this leads to diagnostic confusion. We describe two cases of inverse psoriasis with isolated involvement of axillae. One patient presented with dry mildly scaly plaque, while the other presented with macerated plaque. Histopathology was consistent with the diagnosis of inverse psoriasis. Although there are previous reports, but localization of lesions only to axillae in a case of inverse psoriasis is unique.

Key words

Flexural psoriasis, inverse psoriasis.

Introduction

Inverse (flexural) psoriasis (IP) is a variant of psoriasis characterized by shiny, pink to red, sharply-demarcated thin plaques and there is much less scale than in untreated chronic plaque psoriasis.¹ Prevalence of inverse psoriasis is between 3% and 7% of psoriasis patients.² Its appearance, further modified by sweating in flexures, poses a diagnostic dilemma. Here we report two cases of inverse psoriasis.

Case 1

A 21-year-old girl presented with itchy dry, erythematous plaque in both the axillae for the past 6 years. The lesion started as itchy small erythematous papules, which coalesced to form an erythematous plaque on both the axillae. The lesions were persisting in nature and fresh

lesions kept appearing. There was no seasonal variation; however, in summer, lesions used to get macerated. She did not develop similar lesions anywhere else on the body. She had received treatment for this and there was slight improvement with topical steroid. Rest of the history was unremarkable and no other family member was having similar lesions. On examination, well-defined erythematous plaques were noted in both axillae. These were slightly scaly and few isolated keratotic papules were noted around (**Figure 1**). No other intertriginous area was involved. Scalp, elbow and knees, palms and soles, and nails too were spared. Rest of the mucocutaneous examination was unremarkable. Gram's stain and KOH mount from lesion did not reveal any organism. The histopathology from the lesion showed parakeratosis, some hyperkeratosis, regular acanthosis, suprapapillary thinning and neutrophilic exocytosis (**Figure 2**). Focal collection of neutrophils and stratum corneum and within epidermis was notably absent. Case was diagnosed as inverse psoriasis based on clinical presentation and histopathology. One

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Figure 1 Well-demarcated scaly erythematous plaque in axilla. Isolated scaly papules can be appreciated (case 1).



Figure 3 Moist eroded erythematous plaque in axilla (case 2).

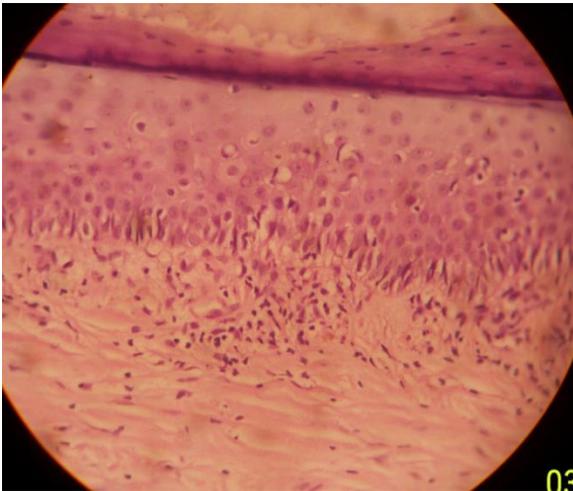


Figure 2 Histopathology showing parakeratosis, acanthosis, and neutrophilic exocytosis. (H&E stain X100).



Figure 4 Histopathology showing acanthosis with neutrophilic exocytosis. Absence of parakeratosis is notable and correlates with clinical presentation (H&E stain X400).

close differential diagnosis was axillary granular parakeratosis, which was ruled out because of absence of granular parakeratosis. Patient was treated with topical mometasone and responded satisfactorily to treatment.

Case 2

A 41-year-old man presented with moist erythematous plaques in both axillae for last 5

years. The lesions had started as erythematous papules and had coalesced to form a thin plaque. They were largely asymptomatic with occasional pruritus and persisting in nature. However, summer aggravation was noted. He did not develop similar lesions anywhere else. Rest of the history was non-contributory. On examination, well-defined eroded plaque oozing and some crusting was noted in both axillae (**Figure 3**). No other lesion was noted in axilla. Scalp, mucosa, elbows, knees, palms, soles and nails were lesion free. Gram's stain and KOH mount from lesion did not reveal any organism. Histopathology from the lesion showed regular acanthosis and suprapapillary thinning. Epidermis was notable for neutrophilic exocytosis; however, focal collection of neutrophils was notably absent (**Figures 4**) Based on histopathological findings, case was diagnosed as inverse psoriasis. He was treated with topical mometasone and responded well to treatment. Lesions resolved within one month with hypopigmentation.

Discussion

IP is a variant of psoriasis, which is localized to flexures and intertriginous areas, in contrast to classical psoriasis, which is classically found over extensor surfaces. IP is usually found in the groins, vulva, axillae, submammary folds, gluteal cleft, navel, intergluteal crease, penis, lips, and web spaces. The frequency with which the genital area alone is involved appears to be low, but this area is not uncommonly involved together with other areas.¹

Like classical psoriasis, IP is also considered a hereditary disease with genetic component. However, it is more frequent and severe in people who are overweight because it is in the skin folds where it is particularly prone to irritation from rubbing and sweating, causing

intense pruritus and pain. The aggravating factors are: anxiety, smoking, alcohol abuse, steroid medications, excessive perspiration, infections and extremely hot or cold climates, scratching, friction, harsh soaps and skin care products, and stress of all sorts.³

IP appears as smooth, dry areas of skin that are red and inflamed but do not have the scaling associated with plaque psoriasis (the most common type of psoriasis); although many patients may have another type of psoriasis elsewhere on the body. These patches look different from classical psoriasis. They are usually smooth, deep red, and glistening without any scale. Although the lesions are themselves anhidrotic, the effect of hyperhidrosis of the surrounding skin, maceration and friction alter the appearance of the psoriasis, which retains its characteristic colour.⁴ The surface has a glazed hue and fissuring at the depth of the fold is common, especially in the gluteal cleft. The margins are usually well-defined, unless secondary infection or medicament dermatitis, both quite common events, has occurred. Psoriasis of the retroauricular folds or the external auditory meatus may be particularly difficult to distinguish from infective or seborrhoeic dermatitis. It may occur as a primary disorder or as a Koebner phenomenon with lesions of classical psoriasis elsewhere.

The common differential diagnoses include seborrhoeic dermatitis, candidiasis, and axillary granular parakeratosis. In seborrhoeic dermatitis, the lesions are lighter in colour, less well-defined and covered with a dull or branny scale. Candidiasis shows a glistening deep red surface, but scaling tends to be confined to the edge, and small satellite pustules and papules are usually evident outside the main area. Axillary granular parakeratosis is characterized by granular

parakeratosis on histopathology and can be differentiated easily on histopathology.⁵

The diagnosis can be suspected clinically and is confirmed by histopathology. The findings are parakeratosis, hyperkeratosis, near absence of the granular layer, acanthosis with elongation of rete ridges and suprapapillary epidermal thinning.⁶ Dilated, tortuous papillary blood vessels almost touching the undersurface of the thinned suprapapillary epidermis are surrounded by a mixed mononuclear and neutrophil infiltrate, as well as extravasated erythrocytes.⁷⁻⁹

The skin of the affected regions becomes too sensitive to even slight irritation. Therefore, adequate care and precaution need to be maintained, while using different types of medications. Generally, topical steroid creams are used to treat but with a lot of caution. Apart from topical steroid creams, coal tar and anthralin are also used for inverse psoriasis treatment. To control the level of moisture of the affected skin, Castellani's paint are used.¹⁰

In addition to these medications, ultraviolet light can also improve the symptoms of psoriasis. It can reduce scaling by lowering skin turnover. Generally, ultraviolet B treatment is employed for inverse psoriasis. Daily exposure to small amount of ultraviolet B light has been found to lessen the symptoms of inverse psoriasis, but an intense exposure is not recommended.¹¹

Along with treatment and dietary modifications, people with IP should be very careful while choosing their clothing. As sweat and moisture tends to aggravate this condition, they should avoid tight fitting clothes. They can get significant relief by wearing loose fitting clothes that can help to keep the affected areas dry.

Cotton clothes, especially cotton undergarments are best for the individuals having psoriasis.

Our cases showed localization of psoriasis lesions to axilla only. No other cutaneous site was involved. Lesions localized to palms and/or soles are well recognized. However, localization of lesions only to axilla in a case of IP is unique and hence, these two cases were reported.

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