Prurigo pigmentosa: Case series and differentiation from confluent and reticulated papillomatosis

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Key words: confluent and reticulated papillomatosis; prurigo pigmentosa; pruritus.

INTRODUCTION
Prurigo pigmentosa (PP) is an uncommon, acquired inflammatory disorder with a predilection for young adults of Asian descent.1 This condition is manifested by highly pruritic, reticulated, and erythematous papules that resolve with hyperpigmentation.2 Multiple cases of PP have been reported since its initial description in 1971 by Nagashima et al3; however, this dermatosis is still underdiagnosed or misdiagnosed.3-6 The most significant challenge limiting the identification of PP is successful distinction from confluent and reticulated papillomatosis (CARP). Herein, 2 patients with PP are described, with a focus on differentiating features from CARP.

CASE SERIES

Patient 1
A 30-year-old Chinese man presented with reticulated erythematous and hyperpigmented papules on his back and shoulders (Fig 1, A and B). The eruption was present for 2 weeks and was associated with severe pruritus. Histopathologic evaluation of a punch biopsy found a subacute spongiotic dermatitis with dyskeratosis (Fig 2, A and B). After treatment with minocycline, 100 mg, and halobetasol 0.05% ointment, both twice daily for 6 weeks, the erythema and pruritus resolved, but hyperpigmentation was persistent (Fig 1, C).

Patient 2
A 31-year-old Indian man presented with a pruritic reticulated eruption on the back, chest, and chin. At the time of presentation, the eruption was present for 3 months and was composed largely of hyperpigmented papules (Fig 3, A and B). Prior treatment with topical hydrocortisone was unsuccessful. Similar to the histopathologic findings observed in patient 1, a punch biopsy found a subacute spongiotic dermatitis with necrotic keratinocytes and pigment incontinence. After treatment with minocycline, 100 mg, and halobetasol 0.05% ointment, both twice daily for 4 weeks, the papular pruritic lesions resolved, but hyperpigmentation was persistent.

DISCUSSION
PP presents with a reticulated morphology, with erythema and pruritus dominating the acute stage and hyperpigmentation predominant in the chronic stage; coexistence of stages is frequent.5,7 CARP is also manifested by hyperpigmented papules with a netlike appearance and a predilection for the trunk and proximal extremities.8 PP and CARP have overlapping clinical morphology, and PP may be clinically diagnosed as CARP given the rarity of the former compared with the latter diagnosis.7 Recently, a case was reported with features of both PP and CARP, suggesting that these conditions may represent a spectrum rather than separate entities.7

Abbreviations used:
CARP: confluent and reticulated papillomatosis
PP: prurigo pigmentosa

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Fig 1. A, Reticulated erythematous and hyperpigmented papules on the back of an Asian man. B, Fine scale is evident and most of the papules are erythematous in the acute stage; the eruption was present for 3 weeks. C, After treatment with minocycline and halobetasol for 6 weeks, the erythematous papules resolved but reticulate hyperpigmentation was persistent.

Fig 2. A, Subacute spongiotic dermatitis with a superficial perivascular lymphohistiocytic infiltrate. B, Dyskeratosis, lymphocyte exocytosis, and Langerhans cell microabscesses are evident. (A and B, Hematoxylin-eosin stain; original magnifications: A, ×100; B, ×200.)

Fig 3. A, Reticulated erythematous and hyperpigmented papules and plaques with confluence on the back of an Indian man. B, The majority of the papules are hyperpigmented at this stage, several months after onset.
However, distinction is facilitated by demographic information, clinical morphology in the acute stage of PP, histopathology, treatment outcomes, and prognosis. These differentiating features are summarized in Table I.

### Table I. Differentiation of PP from CARP

| Demographic | Clinical Morphology | Symptoms | Histology | Treatment | Prognosis |
|-------------|---------------------|----------|-----------|-----------|-----------|
| PP          | Most common in Asian patients and dark-skinned races; rare in whites | Acute: papular, vesicular, or urticarial erythematous eruption with reticulated appearance on chest and back | Severe pruritus ± burning sensation in acute stage | Acute: acute or subacute spongiosis with dyskeratosis ± subcorneal or intraepidermal pustules | Minocycline, doxycycline, tetracycline, dapsone, topical steroids | Acute findings of pruritus and papular or vesicular lesions resolve with treatment; hyperpigmentation persists for months to years |
| CARP        | Occurs in all ethnicities including whites | Scaly, hyperpigmented papules with central confluence and peripheral reticulation on the chest, back, neck, axillae, and occasionally proximal extremities | Asymptomatic in majority; when present, pruritus is mild | Hyperkeratosis, papillomatosis, basilar hyperpigmentation, follicular plugging, flattening of rete ridges | Minocycline, doxycycline, azithromycin, erythromycin, isotretinoin, topical tretinoin, tazarotene, topical steroids | Chronic course with frequent recurrence after discontinuation of therapy; no persistent dyspigmentation |

**CARP**, Confluent and reticulated papillomatosis; **PP**, prurigo pigmentosa.
PP and CARP are both acquired dermatoses of unknown etiology that affect young adults, present with reticulated papules distributed on the trunk, and respond quickly to treatment with minocycline. Discrimination is permitted by attention to demographics, morphology in early or acute disease, histopathologic findings, and the presence or absence of persistent hyperpigmentation after treatment.

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