Polymorphous Light Eruption Presenting as Pinhead Papular Eruption on the Face

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ABSTRACT

Polymorphic light eruption (PMLE) is the most common of the immunologically mediated photodermatoses.[1] Onset is typically within the first three decades of life and affects females two to three times more than males.[2,3] It occurs 30 minutes to 1-3 days after sun exposure and usually resolves in 7 to 10 days.[2] Lesions present as non-scarring, erythematous and minimally pruritic papules, vesicles, papulovesicles, plaques or nodules.[3]

A pinpoint papular variant of PMLE has been reported in individuals with skin phototype IV-VI,[4] characterized by the development of pinpoint papules, 1 to 2 mm, on sun-exposed areas after ultraviolet radiation.[5] PMLE has a predilection for the arms, forearms, hands, head and neck region, usually with sparing of the face.[2,4] We report two cases of American-American males who presented with the pinpoint papular variant of PMLE involving the face.

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CASE REPORT

Case 1

An otherwise healthy 14-year old African American male presents to the Henry Ford Dermatology Clinic in June 2010 for a "rash" on the body as well as facial swelling. Patient reports 2 days prior to his presentation to the clinic he had spent all day outside during a friend's pool party. On the morning after the pool party, patient developed a pruritic eruption with small papules on all sun-exposed areas as well as significant redness and swelling of the face and lips. Patient denied swelling of the tongue or shortness of breath. Patient had been using fexofenadine and pseudoephedrine to reduce the swelling. Of note, patient reported having similar episodes during the previous summer, on five different occasions, where he developed eruption on exposed areas several hours after being exposed to the sunlight. However, patient reported that this was the first time he had swelling associated with the rash.

On physical examination, the patient had numerous, scattered, 1-2 mm skin colored to slightly erythematous pinpoint papules on face, ears, neck, chest, back, abdomen and upper extremities. A presumptive diagnosis of polymorphous light eruption (PMLE) was made. Skin biopsy from the left arm was showed mild epidermal acanthosis and epidermal spongiosis, spongiotic microvesicles, perivascular infiltrate of lymphocytes, histiocytes and rare eosinophils localized within the superficial dermis; these were consistent with the papulovesicular variant of PMLE. Laboratory evaluation, which included antinuclear antibody panel, basic metabolic profile, and complete blood count, were all within normal limits or negative. His glucose-6-phosphate dehydrogenase was low at 1.7 (normal: 7-20.5 U/g Hb). The eruption resolved in two weeks with residual hyperpigmentation.

In May 2012, patient returned to the clinic due to his PMLE flaring after patient was out in the sun for an hour and a half during baseball practice. Patient noticed an eruption on his cheeks, perioral area, and dorsal hands.

On physical examination, multiple 1-mm skin colored papules were observed on his cheeks and perioral area (Fig 1). Also noted on the dorsum of his hands and less predominantly on the forearms were similar skin colored papules. Patient was prescribed triamcinolone 0.1% ointment twice a day to the affected areas; narrowband UVB desensitization therapy, 3 times per week for 7 weeks, was administered. These resulted in marked improvement in his photosensitivity and his ability to tolerate sunlight.

Case 2

A 32 year old African-American male with atopic dermatitis, involving his forehead and dorsum of hands and feet, presented on July 2003 to the Henry Ford Dermatology clinic with a complaint of his face continuing to break out and itch in spite of the use of topical corticosteroids given for his atopic dermatitis. Examination of his face revealed multiple erythematous papules, some coalescing into small plaques located on the forehead and malar prominence, in a sun-exposed distribution (Figure 2). A clinical diagnosis of PMLE of the forehead and malar eminence was made. Patient was prescribed fluocinonide

FIGURE 1. Pinhead papules located on the cheek and in peri-oral area.

FIGURE 2. Pinhead papules on the cheek and malar prominence.

ointment 0.05% to the affected areas of the face for 1-2 weeks, and patient was advised to begin using broad spectrum facial sunscreen with an SPF of at least 30.

Patient returned to the clinic for a 2-week follow-up where he reported mild improvement and minimal pruritus of his facial rash. On examination of his face revealed multiple flesh colored 1-2mm papules on the cheeks and malar prominences. Patient was offered a biopsy during this visit, but declined due to concern of developing a scar. The use of fluocinonide ointment was discontinued, and patient was told to continue using sunscreen. Patient's facial papular lesions resolved with subsequent visits.

"Although PMLE has often been described as sparing the face, we report two cases where facial involvement is the dominant feature of the disorder."

DISCUSSION

PMLE is the most common chronic idiopathic photosensitivity disorder. Lesions manifest as a wide range of morphological variants with the pinpoint papular variant presenting most commonly in patients with skin of color, for example, African Americans and Asians,[4] which was reported in this case series. Although PMLE has often been described as sparing the face, we report two cases where facial involvement is the dominant feature of the disorder. Recognition of this variant of PMLE along with the distribution is important for diagnosing and managing these patients.

Diagnosis of PMLE is frequently made by obtaining a thorough history and physical examination, with specific attention to the morphology, location, seasonal variation, and time course to the evolution of the lesions following UV radiation exposure.[4] In the treatment of PMLE, prevention is important with sun avoidance and photoprotection. Additionally, hardening can be achieved with the use of narrowband UVB (as demonstrated in case 1), or photochemotherapy with psoralen and UVA (PUVA) before the beginning of sunny period.[2] Other treatment modalities include topical corticosteroids, antimalarials; although rare, systemic corticosteroids may be required.[2]

DISCLOSURES

Dr. Lim serves as a consultant for Clinuvel Pharmaceuticals Limited, Estee Lauder Companies, Ferndale, La Roche-Posay, Pierre Fabre, Palatin and Uriage and has received clinical research grants from Clinuvel and Estee Lauder. Dr. Isedeh does not have any relevant conflicts to disclose.

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