presence of a 20 kD prohevein-like protein. In addition jujube extract displayed another component at about 20 kD that is different from prohevein-like one. Of note, the clinically documented protection against latex, achieved with immunotherapy, was not extended to jujube. It is therefore conceivable that the relevant cross-reacting proteins are not identical in the two allergenic sources. As the patient's serum before starting immunotherapy is no longer available, a more detailed investigation was not feasible.

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Furazolidone induced nonpigmenting fixed drug eruptions affecting the palms and soles

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Key words: fixed drug eruption; furazolidone; nonpigmenting fixed drug eruption.

Nonpigmenting fixed drug eruption (NPFDE) is characterized with tender, symmetric erythema or plague that disappears with no residue pigmentation. It always has a predilection site that involves the trunk, inguinal folds, buttocks and palms. The most common offending drug is pseudoephedrine. The NPFDE becuase of Furazolidone (FZD) is reported.

Nonpigmenting fixed drug eruptions affecting the palms and soles is rare.

A 23-year-old man presented with recurrent erythemas at the same site on the palms and soles after administration with FZD within 3 years. Following pigmentary changes is not noted. The reappearance of typical lesions at the same site after oral challenge with 25 mg FZD together with the absent of pigmentation confirm the diagnosis of NPFDE. To the best of our knowledge, this is the first report of NPFDE caused by FZD involving both the palms and soles.

Furazolidone is a synthetic nitrofuran derivative that is an antibacterial and antiprotozoal agent. It is used in the treatment of giardiasis, trichomoniasis, cholera and other vibrio infections. The FZD has been reported to possess anti-helicobacter activity and to have some ulcer-healing properties. Nausea and vomiting are the most common adverse effects of oral FZD therapy. In a small number of patients, hypersensitivity to FZD may cause angioedema, urticaria, erythema multiforme (1). Here we describe a Chinese man with a symmetric lesion of NPFDE on the palms and soles produced by FZD.

A 23-year-old man presented with red patches on both the palms and soles that had been present for the previous 2 days. The rash had developed suddenly with redness and an slight itching sensation after he had taken a tablet of FZD (containing 100 mg) for acute intestinal infection. On examination, the round to oval, well-circumscribed bright-red macules distributed roughly in a symmetric manner on the palms and soles. The diameter ranged from 1 to 3 cm. There were no central blister and telangiectasis (Figs 1 and 2). Those lesions subsided spontaneously within 7 days without any residual hyperpigmentation. His medical history revealed suspected intake of FZD 100 mg twice on two occasions in the past 3 years. The rash had immediately developed 4 h after FZD treatment. The patient denied any other medicine usage. To incriminate FZD as the offender, oral challenge was performed with a intake of one-quarter of the single pharmaceutical dose of 100 mg FZD. And developed acute edematous erythemas over the previous lesions without subsequent pigmentary changes. The reappearance of typical lesions at the same sites after challenge in our patient together with the absence of pigmentation support the diagnosis of NPFDE because of FZD.

Fixed drug eruption (FDE) is a well defined, circumscribed, round or oval patches which varies in severity from a small, localized lesion to generalized involvement. The lesions can occur on any part of the skin or mucous membranes. The most common sites are the trunk, extremities, and genitalia. Recurrent eruption usually develops on the previously involved site 30 min to 8 h after administration of the offending drug (2). Hyperpigmented patches are the most common sequelae and tend to be more extensive and pronounced in people with brown skins. It lasts for months and becomes more pronounced after every recrudescence. There are some variations in shape like urticaria and dermatitis. Cellulites-like or erythema dyschromatosis persistan-like fixed drug eruptions have also been reported as rare demonstrations (3). The diagnostic hallmark is its recurrence at previously affected sites after use of the same causative drugs.

The NPFDE is a rare demonstration of FDE. Only 16 cases have been reported

Figure 1. The round to oval, well-circumscribed macules symmetrically distributed on the palms and soles. The diameter ranged from 1 to 3 cm. There were no central blister or telangiectasis.

Figure 2. Eruptions presented on both soles were similar to those distributed on the palms (illustrated in Figure 1).

since Abramowitz defined the concept of NPFDE in 1937. The most common offending drug is pseudoephedrine (nine cases). Other reported causes of NPFDE include tetrahydrozoline, piroxicam, diflunisal, thiopental, iothalamate and arsphenamine (4, 5). This is the first report of NPFDE induced by FZD involving the palms and soles. The NPFDE shares the following characters: (i) the lesions mainly consists of tender, erythematous plaque, it appears after the offending drug been ingested and completely resolved after the drug has been discontinued; (ii) the lesions are mainly distributed in a symmetrical fashion, though solitary plague has also been recorded; (iii) the red macule or plague resolves without residual pigmentation or other skin discoloration; and (iv) positive oral provocation result is still the most reliable method for establishing the etiologic agent in NPFDE.

To our knowledge, NPFDE always has a predilection site involves the trunk, inguinal folds, buttocks and palms (6, 7). Lesions affecting both palms and soles have never been reported before. The reason for the preferential localization of the lesions to the palms and soles remains speculative. Lesions in classical fixed drug eruption remains heavily pigmented after resolution as a result of hydropic degeneration of the basal cell layer and pigmentary incontinence. As in this case reported here, late stage pigmentation was characteristically spared.

When erythema presents on the palms and soles, several differentiation should be made from NPFDE. In erythema multiforme, although several erythema may form in a symmetric, acral distribution on the extensor surfaces of the extremities at the onset, they always possess characteristic concentric target or iris lesion. Dermatophytid may also have red macules or be accompanied with painful, tense bullae on palms and soles. However, they always have a acute development of tinea pedis. Secondary syphilis may present with acral erythema on the palms and soles. These may be superimposed with little scales. The lesions of syphilis are usually not confined to these areas and are more generally distributed. The patients often have general symptoms such as headache, sore throat or fatigue and lymphadenopathy. Blood test in syphilis may show TPHA and RPR positive. As in our case reported, it is negative. To consider history, lesion morphology, response to drug manipulation, positive oral provocation test, and clinical follow-up all assist to rule out the above conditions.

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