

CORRESPONDENCE

Recalcitrant pruritic urticarial papules and plaques of pregnancy with a prolonged course after delivery

Pruritic urticarial papules and plaques of pregnancy (PUPPP), also called polymorphic eruption of pregnancy, is a relatively common, intensely pruritic dermatosis, which usually occurs late in the third trimester in primigravid women [1]. The rash usually begins on the abdomen, often within, or adjacent to, striae distensae, as erythematous papules coalescing into erythematous plaques, which spread over a few days to involve the trunk and proximal extremities. PUPPP resolves spontaneously or after delivery, which is helpful for confirmation of the diagnosis, and is responsive to topical and oral corticosteroids [1]. We describe an unusual recalcitrant PUPPP which did not resolve until 10 weeks postpartum, despite both topical and oral corticosteroid use.

A 27-year-old Japanese primigravida (35th week gestation) noticed a pruritic eruption on her abdomen spreading to the entire body in less than 1 week, involving the palms and soles but sparing the face and scalp. She took no medications prior to the eruption. The patient (height 159 cm) gained 20 kg during the pregnancy but had no striae distensae. Pityriasis rosea Gibert was diagnosed at a dermatology clinic. She was treated with topical corticosteroids without improvement. A healthy baby was uneventfully delivered (37th week gestation) by cesarean section for breech presentation. A dermatologist, after delivery, made a provisional diagnosis of toxicoderma from the clinical appearance of the erythematous papules and plaques (*figure 1A, B*). Some lesions were targetoid. Symptoms persisted and a skin biopsy was taken six days postpartum. Histopathology showed slight acanthosis with mild spongiosis associated with a perivascular infiltrate consisting of mononuclear lymphocytic cells and a small number of eosinophils in the upper and middle dermis (*figure 1C*). Direct immunofluorescent studies were not performed. A diagnosis could not be made from the histological findings. Due to the severity of symptoms and lack of response to topical steroids, oral prednisolone was commenced at 15 mg/day with an initial improvement but the rash worsened after the dose was tapered to 5 mg/day over 25 days (*figure 1D*), necessitating a resumption at 15 mg/day. A complete resolution was not obtained and the patient was referred to Kobe University Hospital Department of Dermatology. Based on the clinical course and histological findings, the skin eruption was diagnosed as PUPPP. Oral prednisolone was discontinued and conservative management, including topical corticosteroids and oral antihistamines (epinastine hydrochloride),

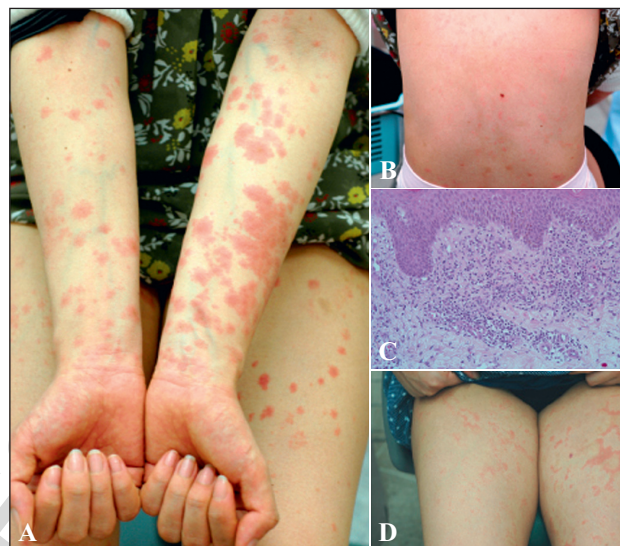


Figure 1. Prepartum appearance of the eruption (**A, B**). Erythematous papules and edematous plaques were scattered over the entire body including the arms, palms, thighs (**A**) and back (**B**). Some of the lesions were targetoid. *Histological findings* (**C**). The epidermis showed slight acanthosis with mild spongiosis. There was a perivascular infiltration of lymphocytic cells and a small number of eosinophils in the upper and middle dermis (haematoxylin and eosin, original magnification $\times 100$). *Clinical appearance of the rash after oral prednisolone dose was tapered* (**D**). Linear and annular erythema and erythematous papules were present on the both thighs.

was initiated, resulting in a gradual improvement of the rash and pruritus. By 10 weeks postpartum, the symptoms had completely resolved.

The diagnosis of PUPPP mostly depends on the clinical findings since histological findings are not specific [1]. The differential diagnosis includes other pregnancy-related dermatoses presenting with pruritus (prurigo gestationis, herpes gestationis, pruritus gravidarum and impetigo herpetiformis). Our case did not have their features [2, 3]. We excluded non-pregnancy-related conditions such as drug eruption, erythema multiforme and atypical pityriasis rosea with erythema multiforme-like lesions. A drug eruption was unlikely since the patient had taken no medications prior to the eruption. Despite the target lesions, erythema multiforme was ruled out due to the histological absence of papillary dermal edema, interface changes and necrotic keratinocytes together with a history of severe pruritus and prolonged duration of approximately 10 weeks. Atypical pityriasis rosea with erythema multiforme-like lesions is not associated with strong pruritus and has numerous

scalings [4], whereas the lesions in our case were intensely pruritic and did not have scaling. Histologically, the lesions show focal parakeratosis [5], which was not seen in this case.

De Gaetano [5] reported a similar recalcitrant PUPPP with a prolonged course after delivery. Lesions were present on the palms and soles and complete resolution was only achieved 6 weeks postpartum and involved two short and one long course of prednisolone. Rudolph *et al.* [6] demonstrated that early onset, multigravidae and atopic diathesis are risk factors for a longer duration of PUPPP. Further accumulation of recalcitrant PUPPP cases persisting after delivery may clarify whether these factors are also predisposing factors for PUPPP with a prolonged course after delivery. ■

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1. Lawley TJ, Yancey KB. Skin changes and diseases in pregnancy. In: Fitzpatrick TB, Eisen AZ, Wolff K, Austen KF, Goldsmith LA, Katz SI, eds. *Dermatology in General Medicine*. 6th ed. New York: McGraw-Hill, 2003: 1361-6.
2. Winton GB, Lewis CW. Dermatoses of pregnancy. *J Am Acad Dermatol* 1982; 6: 977-98.
3. Weisshaar E, Diepgen TL, Luger TA, Seeliger S, Witteler R, Ständer S. Pruritus in pregnancy and childhood – do we really consider all relevant differential diagnoses? *Eur J Dermatol* 2005; 15: 320-31.
4. Friedman SJ. Pityriasis rosea with erythema multiforme-like lesions. *J Am Acad Dermatol* 1987; 17: 135-6.
5. De Gaetano HM, De Gaetano JS. Pruritic urticarial papules and plaques of pregnancy: an unusual case. *J Am Osteopath Assoc* 2002; 102: 44-6.
6. Rudolph CM, Al-Fares S, Vaughan-Jones SA, Müllegger RR, Kerl H, Black MM. Polymorphic eruption of pregnancy: clinicopathology and potential trigger factors in 181 patients. *Br J Dermatol* 2006; 154: 54-60.

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