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CORRESPONDENCE

Pregnancy-associated erythema annulare centrifugum

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Erythema annulare centrifugum (EAC) is the most common form of gyrate erythemas, which is sometimes linked to underlying diseases and conditions such as immunological disorders, infections, malignancy, foods, drugs, stress, or even pregnancy. Pregnancy-associated EAC is rare and only a few cases have been reported.^{1–5} We herein report the case of a Taiwanese woman who presented with typical EAC lesions during pregnancy, which spontaneously resolved after delivery. This is the first time such a case has been reported in Taiwan.

A 34-year-old healthy woman presented to the Department of Dermatology with a 2-week history of asymptomatic skin eruptions that appeared in the 32nd week of her first pregnancy. Clinical examination showed one annular erythematous plaque with trailing scales on her left lower leg (Fig. 1A), which progressed to polycyclic scaly erythema with central clearing on bilateral sides (Fig. 1B) within 1 month. The EAC was diagnosed clinically. All laboratory test results were within normal limits. A body lotion was suggested because the patient was concerned about the possible risk of systemic or topical medication to fetus. At her 38th week, the woman gave birth to a healthy baby, weighing 2550 g. All skin lesions gradually disappeared

within 1 week after the delivery without any further treatment (Fig. 1C). No recurrence was observed during 1 year of follow up.

We thoroughly reviewed pregnancy-associated EAC cases reported in the literature in the year 2013. A total of five cases^{1–5} that followed a course similar to that of our patient were found. The typical EAC lesions occurred during the first pregnancy in all of the six cases. The patients' ages were between 27 and 34 years (mean age: 29.83 years). The period of onset ranged from 12 to 33 weeks of gestational age (mean gestational age: 23.33 weeks). Trunk and limbs were the most commonly affected locations. Two of the cases were treated with low-potency topical corticosteroid, two with body lotions and Vaseline, one without any treatment, and one was not documented. The eruptions disappeared spontaneously after delivery in four cases, and gradually resolved in the late stages of pregnancy in two cases.

The pathophysiology of EAC and pregnancy has not been well-established yet. However, there are some hypotheses about alteration in hormone levels during pregnancy. Changes in the levels of hormones, mainly estrogen, and physiological changes might influence the immunology and inflammatory response of the skin,¹ and then cause hypersensitivity.⁵ Dogan³ reported a causal link between EAC and human chorionic gonadotropin hormone. Fuentelsaz et al⁵ reported that oxytocin and prolactin may play a role in EAC because the skin lesions of some patients became aggravated during breast feeding.

Typical cases of EAC do not require any treatment because they are self-limited. As in pregnancy-related EAC

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Figure 1 (A) One annular plaque with a trailing scale at the inner border of the erythema on the patient's left lower leg in the 32nd week of her first pregnancy. (B) The skin eruption progressed to polycyclic, scaly, and erythematous plaques with central clearing on bilateral lower limbs within 1 month. (C) All skin lesions gradually disappeared within 1 week after delivery without any treatment.

cases, systemic medications are still a cause of concern due to their possible adverse effects on the developing fetus. Compared with the relatively benign course, most expectant women choose low-potency corticosteroids, vitamin D analogs, and body lotions, or are just kept under observation until delivery.

In summary, we reported the sixth case of pregnancy-associated EAC in a Taiwanese woman. The typical EAC lesions appeared on bilateral lower extremities from the 32nd week of pregnancy, and then resolved spontaneously within 1 week after delivery. There was no recurrence during 1-year follow up.

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