Four Cases of Pigmentary Dermacation Lines of Pregnancy with Erythema

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Pigmentary demarcation lines are boundaries between more deeply pigmented skin and areas of lighter pigmentation. We report 4 cases of pigmentary demarcation lines of pregnancy associated with erythema which developed in the third trimester of pregnancy and were symmetrically located in the buttock and posteromedial portion of the lower extremities. After delivery, the erythema disappeared within 3-7 days, followed by slow resolution of the brownish pigmentation. (Ann Dermatol 10:(1) 35-38, 1998).

Key Words: Erythema, Pigmentary demarcation lines, Pregnancy

Pigmentary demarcation lines (PDL) are borders of abrupt transition between deeply pigmented skin and areas of lighter pigmentation. They are most commonly described among Japanese and black people and can be classified into 5 groups according to their distinctive locations. The lines consist of asymptomatic, brownish patches that are bilateral and symmetrical.

An association between PDL and pregnancy has been recognized and several authors have reported this phenomenon. However, only two cases of PDL have been reported in Korea, none of which were associated with erythema.

We herein describe 4 patients who discovered pronounced PDL of pregnancy with erythema in the third trimester of pregnancy which eventually resolved after delivery.

CASE REPORTS

Case 1

A 25-year-old woman, Gravida 2, Para 0, at 28 weeks' gestation, visited our dermatology clinic complaining of asymptomatic erythematous lesions on the lower extremities that developed at 28 weeks' gestation. On physical examination, there were erythematous to brownish patches on the lower buttock and the posterior lower extremities extending from the thighs to the upper one-third of the calves. The same lesions appeared on the upper one-third of the anterior thighs and knees (Fig.1, 2A). The medial side of the lesions showed a lighter color which the patient claimed to be her normal skin color. The lesions were symmetrical and bilateral. The patient had a weight gain of 10 Kg during 32 weeks of pregnancy. She also noticed moderate numbness of the left lower extremity for one week. Her past history was insignificant except for a mercury allergy. Laboratory findings revealed a decrease in hemoglobin (7.2g/dl) and hematocrit (25.9%), but the eosinophil count, renal function test, liver function test and blood glucose level were within normal ranges. A healthy female baby was born at 41 weeks' gestation by normal spontaneous vaginal delivery (NSVD) and her birth weight was 3.15 Kg. A skin biopsy was performed from the lesion of the right posterior thigh two days after delivery. Light microscopic findings revealed superficial perivenular lymphocytic infiltration and a focal increase of basal melanin. The erythema disappeared three days after delivery and about seventy percent of the brownish pigmentation spontaneously resolved three months later.

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Case 2
A 32-year-old woman, Gravida 1, Para 0, at 37 weeks' gestation, visited our dermatology department for evaluation of asymptomatic erythematous lesions on the lower extremities that developed at 34 weeks' gestation. On physical examination, there were erythematous patches extending from the lower buttock to the heels and also involving the anterior lower extremities from the inguinal region down to the anteromedial aspect of the thighs and knees (Fig. 2B). Her weight gain was 15.2 Kg for 37 weeks of pregnancy. Laboratory findings revealed a decrease in hemoglobin (9.1 g/dl) and hematocrit (30.7%), but her eosinophil count, ESR, liver function test were within normal limits. She delivered a healthy male baby at 39 weeks' gestation by NSVD whose birth weight was 3.37 Kg. The erythema disappeared seven days after delivery and the residual brown pigmentation spontaneously disappeared two months later.

Case 3
A 33-year-old woman, Gravida 2, Para 1, at 34

Fig. 1. Erythematous to brownish patches on the posterior aspect of the lower extremities extending from the lower buttock to the upper one-third of the calves (case 1).

Fig. 2. Location of pigmented demarcation lines of pregnancy associated with erythema in case 1(A), case 2(B), case 3(C), and case 4(D).