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LETTER TO THE EDITOR

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Pityriasis lichenoides et varioliformis acuta after vaccination

Dear Editor,

Pityriasis lichenoides et varioliformis acuta (PLEVA) is a cutaneous inflammatory disease of unknown etiology. It has been suggested that infection can be a trigger of PLEVA. Here, we report a case of PLEVA associated with a mixed vaccine injection.

A 13-month-old girl was referred to our dermatology department with a 21-day history of multiple erythematous papules without itch. She had received her first vaccine injection against the measles–rubella (MR) and fourth vaccine injection against the haemophilus influenzae b (Hib) and pneumococcus, 7 days before the onset of the eruption. She had a history of persistent cloaca, but otherwise did not have any symptoms. Eruptions appeared on her abdomen and gradually spread over her entire body. When she visited our hospital, erythematous scaly papules and papulonecrotic lesions developed on her trunk, proximal limbs, and forehead. The rash was most prominent on her chest and abdomen (Figure 1A,B), with only a few rashes on her legs. Laboratory investigations revealed no abnormal findings. Varicella zoster virus IgG and IgM antibody were negative. For further examination, we performed a skin biopsy from her back. The specimen showed marked hyperkeratosis and parakeratosis of the stratum corneum, acanthosis, and intercellular edema in the epidermis. In the dermis, lymphohistiocytic infiltration and erythrocytes extravasation were observed around capillaries (Figure 1C,D). The diagnosis of PLEVA was made based on the clinical feature and histopathological data. Topical difluprednate 0.05% ointment was commenced. The eruption

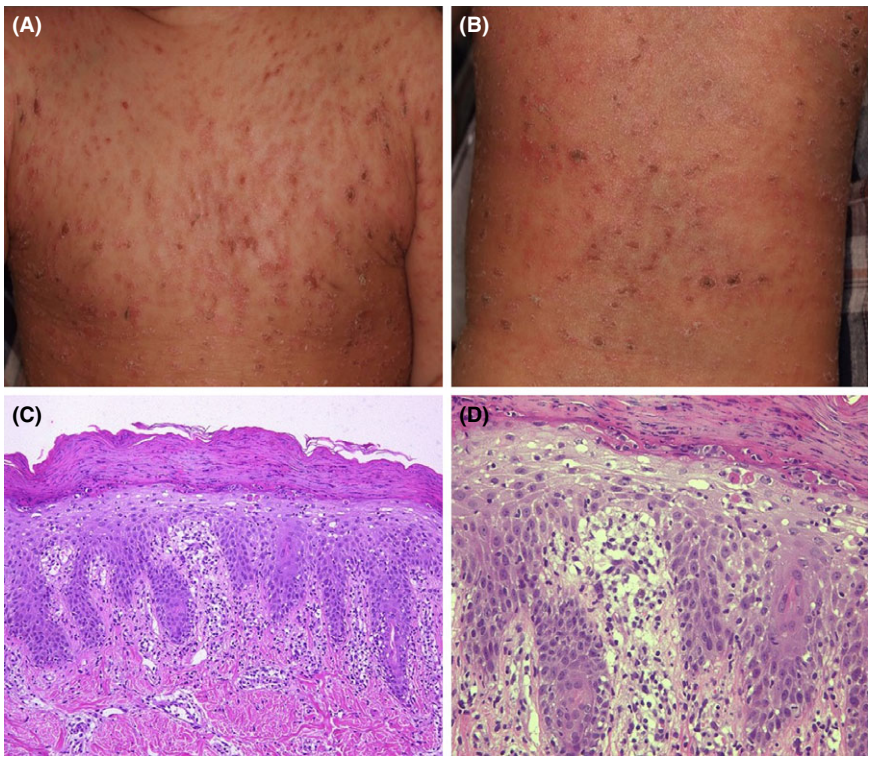

FIGURE 1 A, Erythematous scaly papules and papulonecrotic lesions on the front of the patient's trunk. B, The same eruptions were seen on her back. C, The biopsy specimen showed marked hyperkeratosis and parakeratosis of the stratum corneum, acanthosis, and intercellular edema in the epidermis. In the dermis, lymphohistiocytic infiltration and erythrocytes extravasation were observed around capillaries (Hematoxylin & Eosin (H&E), ×20). D, Numerous apoptotic keratinocytes, exocytosis, and focal interface change were noted (H&E, ×60)

gradually improved leaving the areas of postinflammatory hyperpigmentation. The eruption lasted for a period of 12 weeks and she has had no recurrences.

Pityriasis lichenoides et varioliformis acuta is a cutaneous disorder evident with crops of erythematous macules and papules. A retrospective review of PLEVA in childhood[1] (71 patients) reported the median age of onset as being 5 years old, and median duration being 20 months. Disease was recurrent in 75% of the patients. The pathogenicity of PLEVA is largely unclear, but suggestions include an inflammatory reaction triggered by an infectious agent, an inflammatory response secondary to T-cell dyscrasia, or an immune complex-mediated hypersensitivity.[2]

Four cases of PLEVA associated with vaccination have been reported so far.[3–6] Age of onsets was 2-12 years old. Various vaccines, either inactivated or live ones, were associated with PLEVA. The patients were treated with erythromycin, tetracycline, oral corticosteroids, or topical corticosteroids. The eruptions started 1-10 days after vaccination and healed completely in 1-3 months. Our reported case was consistent with the past reported cases regarding skin manifestations of PLEVA that developed postvaccination. Compared to the typical cases of PLEVA in childhood, PLEVA associated with vaccination tends to show a shorter duration and less recurrence. Considering the total number of vaccinations, PLEVA associated with vaccine is extremely rare, but should be considered as a potential side effect of vaccinations.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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