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CORRESPONDENCE

Contact dermatitis syndrome to poison ivy

A 7-year-old, otherwise healthy Japanese boy, who lived in Wisconsin State, the United States, developed pruritic rash on his lower extremities 10 days earlier. Since lesions increased in number, he was treated with triamcinolone ointment as eczema at a dermatology clinic in the United States. He then returned to Japan temporarily for a legal matter and was treated with olopatadine hydrochloride, an antihistamine drug, and betamethasone butyrate propionate ointment at a dermatology clinic. Since lesions were not improved despite the treatments described above, the patient was introduced to our department. Figure 1A–D shows a physical examination on his initial visit: We noted vesicles and serous papules and edematous swelling on the left lower thigh (A), papules on the lower back (B), tense blisters on edematous erythema on the right forearm (C), and edematous erythema with papules on left gluteal and femoral regions (D). We suspected contact dermatitis to plants, paint, or resin of bench based on morphology, and those lesions improved by administration of prednisolone, 10 mg for 3 days, and betamethasone butyrate propionate ointment for 7 days. During the interview, we could confirm that poison ivy was growing wild in the yard of the patient's house. As his mother wanted to identify the course, patch testing was performed with Japanese standard series 2015: Patch Test Panel® (S) (the trade name of T.R.U.E. TEST in Japan, Sato Pharmaceutical Co.) and 0.002% urushiol and 0.05% mercuric chloride (Torii Pharmaceutical Co.) 1 month after the initial visit. These were applied on the back for 2 days, and the results read utilizing the International Contact Dermatitis Research Group (ICDRG) scoring system 2 and 6 days after application.[1] Extremely positive reactions to urushiol were recorded on Days 2 and 6 (Figure 1E). Hence, we diagnosed it as contact dermatitis to poison ivy.

In Wisconsin State, where the patient lives, poison ivy is considered a typical noxious plant.[2] It is widely known that urushiol is the causative agent in allergic reactions to poison ivy. Urushiol is a typical causative agent of contact dermatitis in Japan, too. According to the Japanese contact dermatitis research group's tally in 2021, the positive rate to it was 8.7%: The fifth highest rate after gold thiosulfate, nickel sulfate, cobalt chloride, paraphenylenediamine among 24 allergens of the Japanese standard series.[3] Hence, the Ministry of Foreign Affairs of Japan has issued a warning to travelers to the United States against poison ivy on its website.[4] In this case, lesions developed not only at contact sites to poison ivy but at noncontact sites like the back and gluteal region. This is a condition that should be called contact dermatitis syndrome[5] or stage 3A of allergic contact dermatitis syndrome: It is considered that the causative allergen was absorbed at the primary site and enlarged to other sites via blood vessels.[6]

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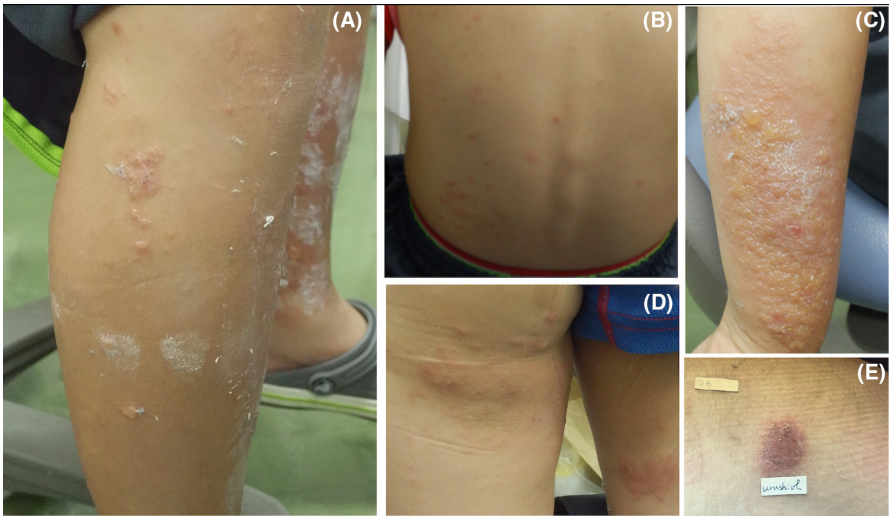

FIGURE 1 (A) Vesicles and edematous swelling on left lower thigh. (B) Scattered papules on the back. (C) Blisters and edematous erythema on the right forearm. (D) Edematous erythema and papules on left gluteal and femoral regions. (E) Extremely positive reaction to urushiol 6 days after application.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

ETHICS STATEMENT

Approval of the research protocol: N/A.

Informed Consent: The patient provided informed consent for the publication of the images submitted with this article.

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