

LETTER TO THE EDITOR

Cutaneous reactions after coronavirus disease 2019 vaccination: Summary of 20 Japanese cases

Dear Editor,

There have been an increasing number of papers reporting cutaneous reactions after coronavirus disease 2019 (COVID-19) mRNA vaccination.¹⁻⁴ Early local injection site reactions are most common.^{1,2} Various kinds of skin manifestations such as delayed large local skin lesions called “COVID arm”, urticarial eruptions, morbilliform rash, erythema multiforme, and erythromelalgia are reported.^{3,4} In rare cases, leukocytoclastic vasculitis, bullous diseases, reactivation of herpes zoster, or flare of existing dermatological condition is observed. We experienced 20 cases with skin reaction after COVID-19 vaccination from May to December 2021 (Table S1). Of 20 patients (median [range] age, 45 [16–79] years; seven male and 13 female), skin adverse events occurred in a median (range) of 2.5 (0–14) days after receiving the vaccine. In Japan, the vaccines are manufactured by Pfizer-BioNTech or Takeda/Moderna. More than half of the cases (55%) developed skin reactions after the second administration of the Pfizer-BioNTech vaccine probably due to the high frequency of use. The types of skin reactions were five cases with urticaria, four cases with morbilliform rash (Figure 1a), two cases with papulovesicular lesions, and

one case with erythema multiforme (Figure 1b). Only one case showed large erythematous rash on the injected upper extremity (Figure 1c). She also showed vesicles on the dorsal side of thumb in the same extremity (Figure 1d). Injection site reactions were rare probably because they were treated by private practitioners. Interestingly, three cases showed alopecia (Figure 1e). Various factors such as stress, insufficient sleep, and fatigue can be associated with alopecia, which makes it difficult to conclude that the skin lesions were associated with the vaccination. Some dermatological reactions to COVID-19 mRNA vaccines, however, are reported to mimic COVID-19 infection itself such as erythromelalgia.^{3,4} Alopecia after COVID-19 infection is well known, suggesting that alopecia after vaccination is also related to COVID-19 mRNA vaccines. Indeed, cases with recurrence of alopecia areata (AA) after COVID-19 vaccination were recently reported.⁵ Flare of atopic dermatitis (AD) is seen in two patients (Figure 1f). It might be better to inform patients with AD, whose prevalence is high in Japan, in advance of the possibility of the flare after vaccination. Including two cases with urticaria who had been under treatment for the disease, one case with AA and one case with seborrheic dermatitis showing worsening of their symptoms, six cases (30%) showed flare of the existing dermatological conditions. It is of note that the flare of AD and AA started later (2–14 days) after vaccination, while urticaria developed at early time points (0–3 days). With regards to treatment, 12 cases (60%) were treated with topical steroid and/or oral antihistamines. Six cases (30%) were treated with oral steroid, two of which needed hospitalization. Although the durations of treatment varied among patients, they were almost similar to those for patients unrelated to COVID-19 vaccination. In conclusion, various skin reactions can develop after COVID-19 vaccination and some need treatment with oral steroid. The possibility of the flare of AD and urticaria after vaccination, which is generally controlled within a few weeks, should be noticed.

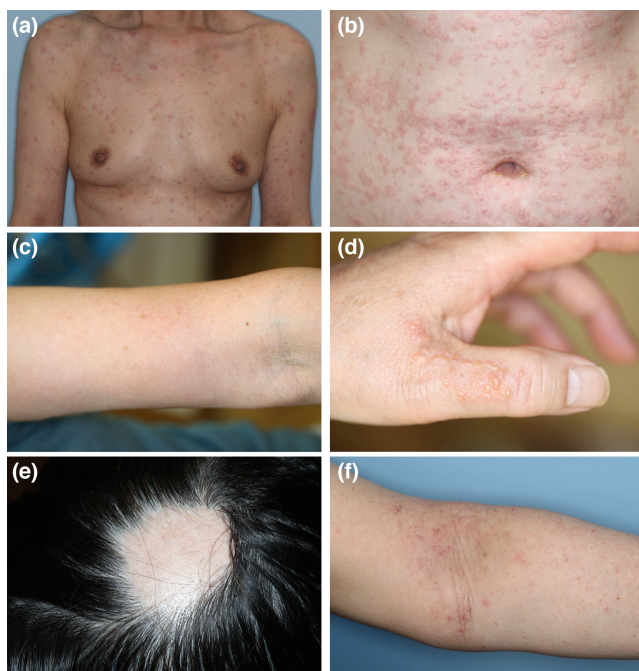


FIGURE 1 (a) Morbilliform rash. (b) Erythema multiforme. (c) Large erythematous rash on the injected upper extremity. (d) Vesicles on the dorsal side of thumb of the same side. (e) Alopecia. (f) Flare of atopic dermatitis

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CONFLICT OF INTEREST

None declared.

Taro Akatsuka

Yuka Sakai

Tetsuo Toyama

Sohshi Morimura

Toshihisa Hamada

Makoto Sugaya

Department of Dermatology, International University of Health
and Welfare, Chiba, Japan

Correspondence

Makoto Sugaya, Department of Dermatology, Faculty of
Medicine, International University of Health and Welfare
852 Hatakeda, Narita, Chiba 286-8520, Japan.
Email: sugayamder@iuhw.ac.jp

ORCID

Toshihisa Hamada  <https://orcid.org/0000-0003-4192-5707>

Makoto Sugaya  <https://orcid.org/0000-0002-1618-329X>

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