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DERMATOLOGIC THERAPY WILEY

LETTER

A case of symmetrical drug-related intertriginous and flexural exanthema-like eruption associated with Pfizer COVID-19 vaccination

Dear Editor,

Israel's nationwide COVID-19 vaccination campaign has so far shown marked success. According to the Israeli Ministry of Health, as of November 2021, two doses of BNT162b2 (Pfizer–BioNTech) had been administered to nearly 5.7 million people aged 12 years and older (62% of the population), 6.2 million (68% of the population) had received at least one dose, and 4 million (44%) had received the third dose (booster). The latter represents one of the highest vaccination rates of the booster dose in the world.[1]

Studies have demonstrated a variety of cutaneous reactions following COVID-19 vaccination.[2,3] The most common reactions are large delayed local reactions, followed by local injection-site reactions, morbilliform eruptions and urticarial eruptions. Less common reactions include pernio/chilblains, herpes zoster infection, herpes simplex flare-ups, pityriasis rosea-like reactions, and cosmetic filler reactions.[3]

We report the case of a 59-year-old patient who presented with a 4-week history of a tender rash involving his bilateral axillae, upper inner thighs, groin, genitalia, and buttocks. His medical history included ischemic heart disease, dyslipidemia, and tobacco use. Chronic medications included bisoprolol, atorvastatin, and aspirin, all administered for many years. In the search for the triggering cause, the patient reported having been vaccinated with the third dose against COVID-19 (Pfizer vaccine) 2 days prior to the first signs of the rash.

Skin examination demonstrated symmetrical erythematous plaques with well-demarcated borders covered with erosions and crust in a few areas. The rash was located on the following skin areas: bilateral axillae, groin, genitalia, and pubis area (Figure 1).

Laboratory examination showed leukocytosis (17,000 cells/μl) with neutrophilia; C-reactive protein, and renal and liver functions were normal. No nutritional deficiencies were detected. Histopathological analysis of a punch biopsy showed superficial perivascular lymphocytic infiltrate with eosinophils.

Based on the clinical and histological manifestations, symmetrical drug-related intertriginous and flexural exanthema (SDRIFE)-like eruption due to COVID-19 vaccination was diagnosed. We used the Naranjo probability and WHO-UMC causality scales to assess the association between the trigger (the vaccination) and the reaction. Scores for both scales indicated probable reaction. The degree of severity according to Hartwig's severity-assessment scale was 4.

Owing to an insufficient response to topical and systemic corticosteroids (dosage up to 40 mg prednisone for 2 weeks) and mood changes experienced by the patient due to the high dose of prednisone, we decided to add treatment with 100 mg cyclosporine twice daily (2.5 mg/kg per day) and the patient was tapered off prednisone over the course of 2 weeks until its discontinuation. Treatment with cyclosporine was continued at this dosage for 1 month with good response and reduction of the pronounced inflammatory reaction. The dosage of cyclosporine was then tapered off over 1.5 months until discontinuation, with maintenance of clinical response. Laboratory examination showed that the leukocyte value had returned to the normal range. It should be noted that no treatment side effects were recorded; the patient was able to return to his daily activities and was very satisfied with the treatment.

SDRIFE, previously known as baboon syndrome, is a type IV/delayed hypersensitivity immune response, presenting as symmetrical erythema of the gluteal and intertriginous areas, with the absence of systemic symptoms. It is triggered by exposure to systemic drugs, most commonly beta-lactam antibiotics, but also many other agents.[4]

Four cases of SDRIFE-like eruption due to COVID-19 vaccination have been reported to date (Table 1), the first associated with the CoronaVac vaccine, which contains an inactivated form of the COVID-19 virus,[5] the second with the Oxford-AstraZeneca mRNA vaccine,[6] and the other two recently reported with the Pfizer–BioNTech mRNA vaccine.[7]

To our knowledge, ours is the fifth case of SDRIFE-like eruption secondary to COVID-19 vaccination, the third such case triggered by vaccination with BNT162b2 (Pfizer–BioNTech), the first reported case

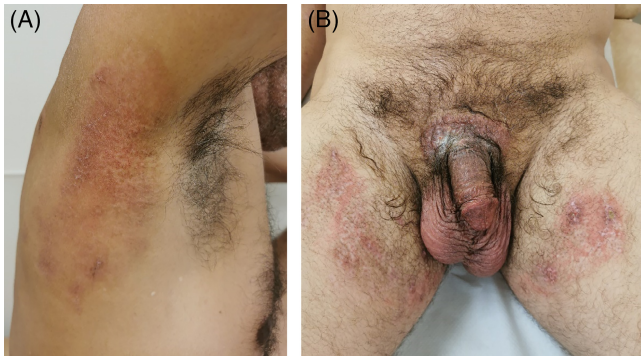

FIGURE 1 Symmetrical erythematous plaques with well-demarcated borders covered with erosions and crust on both axillae (A) and groin (B)

TABLE 1 Reported cases of SDRIFE-like eruption secondary to COVID-19 vaccination

Case	Age and gender	Vaccine type	Vaccine dose prior to symptom appearance	Time from vaccination until symptom appearance	Treatment
1	87 M	CoronoVac	N/A	4 days	Oral prednisolone 40 mg/day with tapering off (total duration of 3 weeks); topical corticosteroids; oral antihistamines
2	61 M	ChAdOx1 nCoV-19 (Oxford-AstraZeneca)	2	1 day	Oral prednisone 30 mg/day with tapering off
3	23 M	Pfizer–BioNTech	2	6 weeks	Topical corticosteroids (total duration of 1 month)
4	38 F	Pfizer–BioNTech	2	2 weeks	Oral prednisone 40 mg/day with tapering off (total duration of 9 days); topical corticosteroids
Our case	59 M	Pfizer–BioNTech	3	2 days	Oral prednisone 40 mg/day with tapering off (total duration of 1 month); cyclosporine 2.5 mg/kg per day with tapering off (total duration of 2.5 months); topical corticosteroids

following the third dose of this vaccine, and the first reported case in Israel.

AUTHOR CONTRIBUTIONS

Roni P. Dodiuk-Gad: Conceptualization, review and editing, supervision. **Michael Ziv**: Conceptualization, review and editing. **Judit Krausz**: Histopathological assessment. **Amir Manaa**: Writing original draft, conceptualization, visualization, resources.

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CONFLICT OF INTEREST

All authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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