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DERMATOLOGIC THERAPY WILEY

SHORT REPORT

Sweet syndrome after Oxford-AstraZeneca COVID-19 vaccine (AZD1222) in an elderly female

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Abstract

Vaccination for COVID19 infection is in full swing all around the world and while the vaccines are considered overall safe, many cutaneous and extracutaneous adverse effects have been reported after their use. Local injection-site reactions are the commonest adverse effect described with the use of these vaccines. We describe a case of Sweet syndrome in an elderly female after the first dose of Oxford-AstraZeneca COVID-19 vaccine (AZD1222).

KEYWORDS
adverse effects, COVID vaccine, skin, Sweet syndrome

Sweet syndrome (SS) is a rare cutaneous disorder characterized by fever and the sudden onset of multiple tender, red or bluish -red plaques on the limbs, trunk or face. The disease is also known as acute febrile neutrophilic dermatosis. The exact cause of SS is unknown but sometimes the disease is triggered by infections, malignancies like leukemias, breast or colon cancer and by drugs like granulocyte-colony stimulating factor (G-CSF), non-steroidal anti-inflammatory drugs (NSAIDS), antibiotics and certain drugs that increase production of white blood cells.[1] There are also some reports of SS occurring after vaccinations including bacille calmette guerin vaccination, influenza vaccine as well as Pneumococcal vaccination.[2,3] We report herein a case of SS that started 1 week after Covishield vaccination. The consent of the patient has been taken for the use of her details and pictures in this report.

An elderly female, 65 years of age, presented to our outpatient department with a history of painful erythematous rash on her hands, feet and distal forearms of 3-week duration. The patient was hypertensive but non diabetic and had no other comorbidities. The patient had received her first dose of COVID 19 vaccine (Oxford-AstraZeneca COVID-19 vaccine-Covishield) about 7 days before the onset of the rash. After the vaccination, the patient had developed fever on the second day followed by the rash after about 7 days. The rash had started acutely on the hands and progressed rapidly over 1–2 days to involve her feet as well. The patient was finding it difficult to walk properly because of the lesions on her feet. The rash was associated with fever of mild to moderate degree and there was history of joint pains involving the hand and feet joints as well. She had used multiple topical and oral medicines over the duration of her illness but without a response.

On general physical examination, the patient was seen to be febrile (100 °F) but there were no other significant systemic examination findings. Cutaneous examination revealed multiple deep-red plaques on dorsa of both hands and feet and also on palms. The plaques were bilaterally symmetrical with ill-defined borders (Figure 1A,B). Surface temperature was raised over the plaques and they were quite tender to touch. Non-pitting edema was present on both feet and movements of hands and feet were mildly painful. Laboratory investigations revealed significant leukocytosis (14,000/mm^3) with neutrophilia (82% of total leukocyte count) with significantly raised erythrocyte sedimentation rate (60 mm in 1 h) and normal liver and kidney function tests. C-reactive protein (CRP) was highly positive. Chest X ray and abdominal ultrasound examination was normal. A skin biopsy was taken from a representative lesion for histopathological examination and it confirmed the diagnosis of Sweet's syndrome (Figure 2A,B).

The patient was put on injectable dexamethosone for 1 week with close monitoring of blood pressure. Response to treatment was positive at 1 week and the erythema had subsided significantly after 1 week of treatment. Oral colchicine 0.5 mg twice daily and topical corticosteroids were started after 1 week and the patient is still on oral treatment.

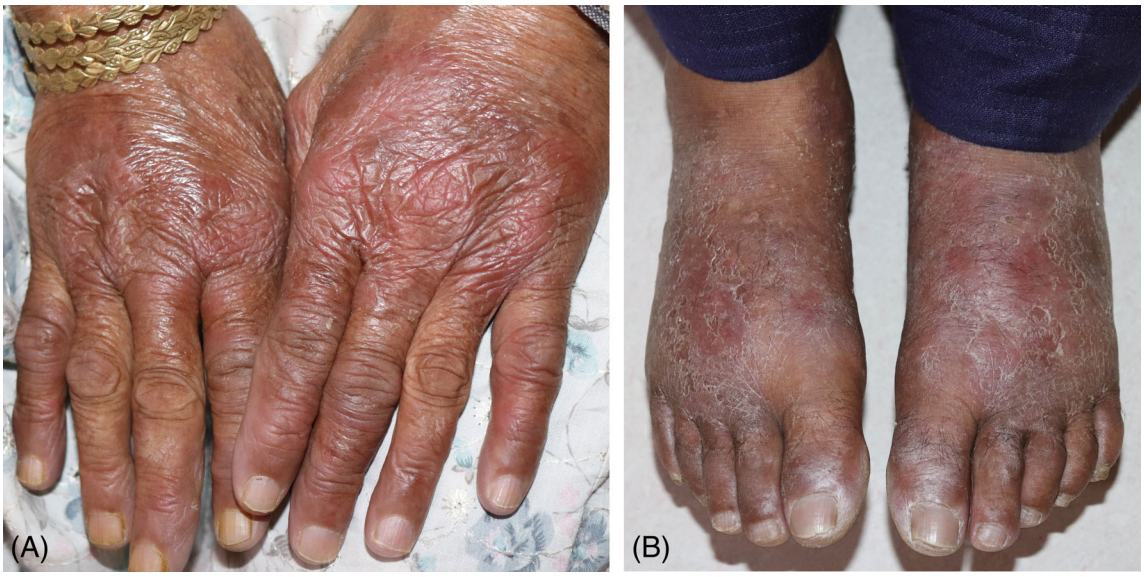

FIGURE 1 (A, B) Tender erythematous plaques on dorsum of hands and feet with pedal edema

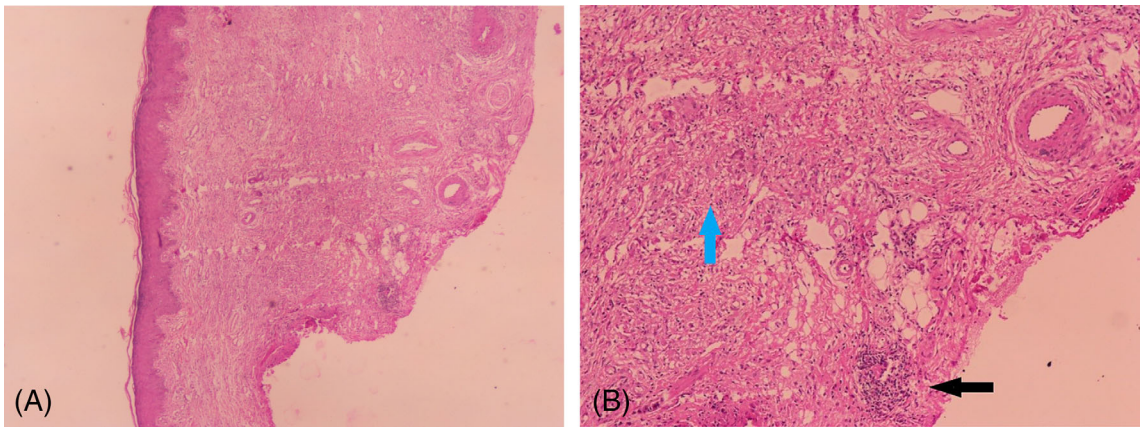

FIGURE 2 (A, B) Histopathology showing typical features of Sweet syndrome. Black arrow shows the dense neutrophilic infiltrate in dermis while the blue arrow depicts the dermal edema present

While the short-term safety of all COVID 19 vaccines has been demonstrated in Phase 2 and Phase 3 clinical trials, some cutaneous and systemic adverse events have been reported after their routine use. Cutaneous adverse effects reported with COVID 19 vaccination include local injection site reactions, urticaria, angioedema, exacerbation of atopic eczema and also anaphylactic reactions.[4] While going through the literature we could find a case report of SS after RNA-based COVID 19 vaccination (Pfizer vaccine) but we were unable to find any report of SS after the adenovirus based COVID vaccine Covishield.[5] Data about the efficacy and safety profile of COVID 19 vaccines is evolving and this report adds to the list of reported adverse effects of COVID 19 vaccination, specifically the Covishield vaccine.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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