

CORRESPONDENCE

Erythematous reaction of the BCG site to Pfizer-BioNTech COVID-19 vaccine

Dear Editor,

A 22-year-old woman presented to the Dermatology Department with a pruritic rash. Her past medical history was not contributory, and her grandmother was diagnosed with rheumatoid arthritis. She was a nurse working for our hospital and received the first dose of Pfizer-BioNTech COVID-19 Vaccine 7 days earlier. Six days after vaccination, she developed erythema on her left upper arm. Physical examination revealed edematous, erythematous lesions on and around the Bacille Calmette-Guérin (BCG) inoculation site (Figure 1A). The white cell blood count was normal, as was the biochemical screen: WBC 5540/ μ l (60.8% neuts, 31.8% lymphs, 4.5% monos, 2.0% eos, and 0.9% basos), RBC 4.64×10^6 / μ l, HGB 14.1 g/dL, HCT 40.8%, PLT 10.1×10^4 / μ l, Alb 4.9 g/dL, AST 18 U/L, and ALT 12 IU/L. C-reacted protein (0.04 mg/

dL) and antistreptolysin O (17 IU/mL) antibody levels were normal. Histopathological examination of a biopsy specimen (Figure 1B) demonstrated mild exocytosis and perivascular and periadnexal infiltration of lymphocytes in the dermis and subcutaneous tissue (Figure 1C). Phenotype of these cells showed that most were characterized by CD3+ and CD8+ cells. Three days later, the lesions disappeared spontaneously. It is well known that erythema at the BCG inoculation site, like our case, is found in children with Kawasaki disease (KD).¹ Verdori et al.² found a 30-fold increased KD-like incidence in children in Italy through the SARS-CoV-2 epidemic. However, KD surveillance team in Japan reported that no relationship was observed between the disease and COVID-19,³ and our case demonstrated no overt symptoms suggesting KD. The Pfizer-BioNTech COVID-19 Vaccine has been adapted

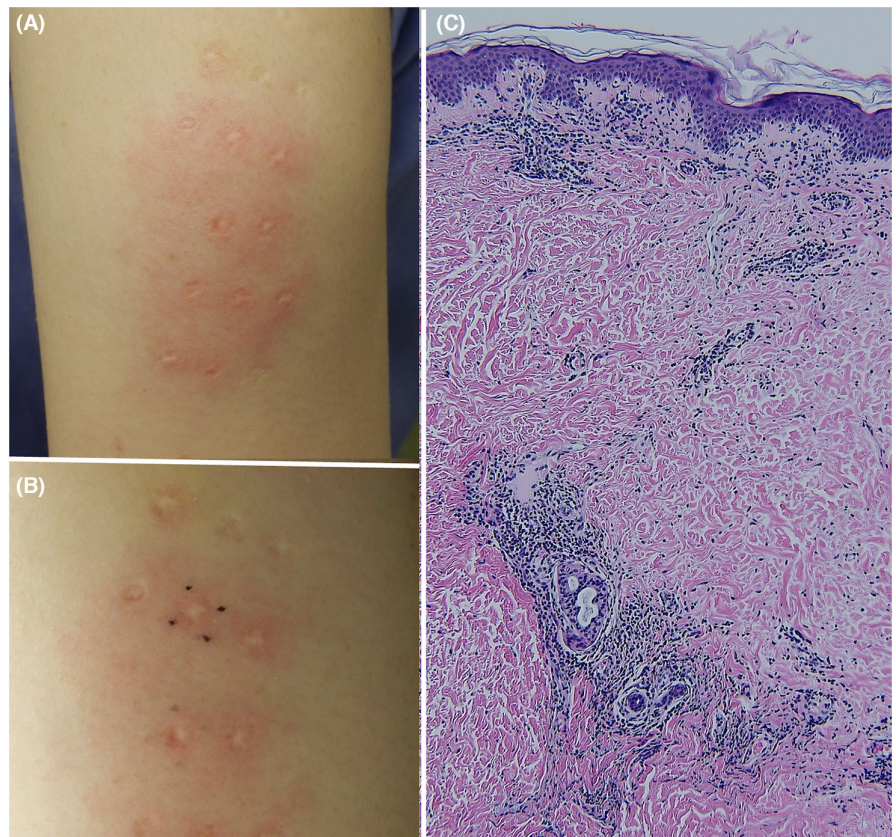


FIGURE 1 (A) Clinical finding of initial visit s: edematous, erythematous lesions on and around the Bacille Calmette-Guérin (BCG) inoculation site. (B) Erythematous lesion, where a biopsy was performed. (C) Histopathological findings: mild exocytosis and perivascular and periadnexal infiltration of lymphocytes in the dermis.

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for individuals 16 years of age and older since December 11, 2020. The U.S. Food and Drug Administration expanded the emergency use authorization to include adolescents 12 through 15 years of age on May 10, 2021.⁴ Japan also started the vaccination for children aged 6 months to 4 years in October 2022. After its expansion to younger age, we have to pay attention to such reactions as a rash on the BCG inoculation site.

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CONFLICT OF INTEREST STATEMENT

The authors declare that they have 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.

Registry and the Registration No. of the study/trial: N/A.

Animal Studies: N/A.

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