

Multiple drugs

Disseminated varicella-zoster virus infections and vaccine failure: 2 case reports

In a case report, a 58-year-old man and a 70-year-old woman were described; they developed disseminated varicella-zoster virus (VZV) infections after receiving elasomeran or tozinameran for immunisation against COVID-19. Additionally, they exhibited vaccine failure with GSK-137173A or varicella-zoster-virus-vaccine-live [dosages and routes not stated].

Case 1: A 58-year-old man presented with a new-onset diffuse eruption. He had received first dose of tozinameran [BNT162b2; Pfizer-BioNTech] COVID-19 vaccine 31 days prior. After 21 days, he received the second dose, which was followed by 24 hours of chills and fatigue. On day 3 after vaccination, he developed diarrhoea and painful widespread skin eruption for 24 hours. Skin examination showed discrete round erosions and intact vesicles and pustules on erythematous bases over the neck, scalp, trunk, extremities and genitalia. He had received GSK-137173A zoster vaccine [Shingrix, supplied by GlaxoSmithKline] 8 months previously. A diagnosis of disseminated VZV infection was made, suggesting GSK-137173A zoster vaccine failure. Intact vesicle of the left arm was biopsied and he was treated with valaciclovir. Laboratory investigations revealed mild leukocytosis (lymphocyte-predominant), positive PCR for VZV DNA from blood and elevated VZV immunoglobulin M and IgG antibody titres. Dermatopathology showed florid, mixed dermal inflammatory infiltrate and extensive epidermal ulceration. Immunohistochemistry for VZV was positive. Two weeks following valaciclovir initiation, the eruption resolved completely. The VZV infection was thought to have been secondary to the COVID-19 vaccine.

Case 2: A 70-year-old woman, who had a history of resolved SARS-CoV-2 infection, presented with a diffuse erythematous vesicular rash. Eight days prior to presentation, she had received the first dose of the elasomeran [Moderna] COVID-19 vaccine and 5 days later, she developed a pruritic skin eruption with daily fevers. Examination showed thin erythematous papules and vesicles over the forehead, extremities and trunk. Ten years previously, she had received varicella-zoster-virus-vaccine-live [Zostavax; supplied by Merck]. Dermatopathology showed papillary and mid-dermal lymphocytic infiltrate with admixed neutrophils and foci of lymphocytic vasculitis. PCR from a sampled vesicle was positive for VZV DNA. A diagnosis of disseminated VZV infection was made, suggesting varicella-zoster-virus-vaccine-live failure. She was treated with valaciclovir and on the following day, she was admitted for aciclovir treatment. One week after hospital discharge, a near complete resolution of the infection with diffuse post-inflammatory hyperpigmentation was noted. One week after completing valaciclovir treatment and 4 weeks after the first dose, she received the second COVID-19 vaccine dose without complications. The VZV infection was thought to have been secondary to the COVID-19 vaccine.