

Cutaneous adverse reactions to COVID-19 vaccines in a tertiary university hospital

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Background/Aims: COVID-19 vaccination is recognized as a public health priority in the era of pandemic COVID-19. However, various adverse reactions such as systemic, neurologic, cardiovascular, hematologic and, cutaneous reactions to COVID-19 vaccines have been reported worldwide. Cutaneous reactions are relatively mild, but they are important due to their visibility and the potential for vaccine hesitancy. We aimed to evaluate the characteristics of the patients experienced cutaneous reaction after COVID-19 vaccination.

Methods: We had conducted a retrospective medical review of the patients developed cutaneous reactions after COVID-19 vaccination from March 2021 to June 2022 in Dong-A University Hospital. Local injection site reactions were excluded. The clinical characteristics of the patients were analyzed according to the time interval between cutaneous reactions and vaccination (acute < 1 day vs. delayed > 1 day) and treatment duration (short-term < 2 months vs. long-term > 2 months).

Results: A total of 91 patients experienced cutaneous reactions after COVID-19 vaccination in this study period. Acute reactions occurred in 36 (39.6%), and 27 (26.7%) received long-term treatment. Urticaria (78%) was the most common reactions, and 65.9% of the patients showed cutaneous reactions after the first dose of vaccination. Patients with delayed reactions had a significant longer treatment duration (69.35 ± 89.02 days vs. 31.25 ± 79.54 days, $P=0.04$) than those with acute reactions. Long-term treated patients showed lower emergency department visit (46.9% vs. 63%, $P=0.003$), and occurred cutaneous reactions more frequently after 3rd dose vaccination (33.3% vs. 4.7%, $P=0.001$) compared with short-term treated patients. Long-term treated patients received more leukotriene receptor antagonists and longer systemic steroid treatment.

Conclusions: Cutaneous adverse reactions to COVID-19 vaccines are usually minor and not life-threatening. However, some may need longer treatment, especially in patients developed delayed reactions or reactions after latter dose vaccination.