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# Clinical and pathologic correlation of cutaneous COVID-19 vaccine reactions including V-REPP: A registry-based study



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**Background:** Cutaneous reactions after COVID-19 vaccination have been commonly reported; however, histopathologic features and clinical correlations have not been well characterized.

**Methods:** We evaluated for a history of skin biopsy all reports of reactions associated with COVID-19 vaccination identified in an international registry. When histopathology reports were available, we categorized them by reaction patterns.

**Results:** Of 803 vaccine reactions reported, 58 (7%) cases had biopsy reports available for review. The most common histopathologic reaction pattern was spongiotic dermatitis, which clinically ranged from robust papules with overlying crust, to pityriasis rosea-like eruptions, to pink papules with fine scale. We propose the acronym “V-REPP” (vaccine-related eruption of papules and plaques) for this spectrum. Other clinical patterns included bullous pemphigoid-like (n = 12), dermal hypersensitivity (n = 4), herpes zoster (n = 4), lichen planus-like (n = 4), pernio (n = 3), urticarial (n = 2), neutrophilic dermatosis (n = 2), leukocytoclastic vasculitis (n = 2), morbilliform (n = 2), delayed large local reactions (n = 2), erythromelalgia (n = 1), and other (n = 5).

**Limitations:** Cases in which histopathology was available represented a minority of registry entries. Analysis of registry data cannot measure incidence.

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