

LETTER

Comment on “Cutaneous manifestations of COVID-19: A case report and a new finding from Egypt”

Dear Editor,

We read with interest the case report by Farouk and Sadek published recently in *Dermatologic Therapy*.¹ The authors reported an Egyptian health care professional with coronavirus disease 2019 (COVID-19), presented with a progressive pruritic, polymorphic eruption: erythematous, morbilliform, and urticarial. Later, the patient developed “petechial” enanthem of the oral cavity and wart-like lesions of the lower extremities. With hospitalization to control her progressive systemic signs, the polymorphic eruption and wart-like lesions had subsequently regressed with systemic signs improvement.¹

Cutaneous signs or rashes in association with COVID-19 pandemic are polymorphic and mostly include erythema, chilblain-like and urticarial lesions, with varied incidence rate between nations. Petechial and purpuric changes have also been described.² Drago et al³ reported that oral cavity lesions/enanthem presented in erythematovesicular and petechial patterns were most commonly induced by viral infections, with petechial one being more frequently encountered in adults. Recently, Jimenez-Cauhe et al⁴ studied 21 patients with COVID-19 for possible enanthem to distinguish viral-related rash from confusing drug reactions. The authors noted that five patients had palatine petechiae as a main component of their enanthem. Unlike the report by Farouk and Sadek,¹ no enanthem was noted in any patient with urticarial or maculopapular rashes.⁴ Regarding the wart-like lesions reported by Farouk and Sadek in their patient as a presumed new clinical cutaneous signs of COVID-19, the authors conveyed it to reactivation of a dormant human papilloma virus (HPV) infection.¹ We agree with that as reactivation of endogenous and dormant viruses by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection could somewhat explain the polymorphic eruption associated with COVID-19 in a single viral host.⁵ Compared to other epidermal cells, COVID-19 patients in viremic state have shown a higher angiotension-converting enzyme 2 expression in keratinocytes mainly in differentiating keratinocytes, such as those harboring HPV, and basal cells.⁶ Saadeh et al⁷ noted that plasmacytoid dendritic cells constitute a central component of the inflammatory host response in inflamed warts, and their active production of type I interferons (IFNs), including IFN-gamma, ultimately contributes to wart regression. Interestingly, a strong early SARS-CoV-2-induced type I IFN response is associated with early viral clearance and a mild course of the disease, whereas an insufficient type I IFN response may be associated with progression to more severe disease.^{8,9} In other words and according to the type I IFN response, SARS-CoV-2

infection had induced a massive “inflammatory storm” associated with hematogenous dissemination of the virus to a possibly HPV-loaded keratinocytes. The latter had shown a higher degree of differentiation and proliferation resulting in a warty lesions. This hypothesis may be considered for wart and wart-like lesions that may entail HPV antigens. Unfortunately, Farouk and Sadek¹ had not obtained a skin biopsy for the “wart-like” lesions for dermatopathology and immunohistochemical study, taken into consideration infection control measures, to confirm or refute HPV infection.

We applaud Farouk and Sadek¹ for their interesting observation of a wart-like lesions in a rapidly progressive COVID-19 health care worker. We urge dermatologists not only in public, teaching, or university hospitals, but also in private practice to document their observation in any encountered COVID-19 with skin signs. Biopsy is essential to verify the nature of the lesion and clinical and prognostic value.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

AUTHOR CONTRIBUTIONS

The authors worked equally in preparing this manuscript for submission to *Dermatologic Therapy*. All the authors collected the scientific data and shared in writing the initial draft. All the authors reviewed and approved the final draft. Ayman Abdelmaksoud submitted the final draft.

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