Dermographism in COVID-19

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DESCRIPTION

A 24-year-old man with a history of relapsing juvenile dermatomyositis inactive for 5 years presented with 1 week of anosmia, dysgeusia and pruritic rash. He also endorsed fatigue and myalgias but no fevers, cough or dyspnoea. His examination was notable for a diffuse maculopapular rash with occasional crusted papules on the proximal upper and lower extremities as well as abdominal linear, violaceous stria. They were pruritic with blanching erythema and were distributed on sun-protected areas of the skin. Interestingly, a well-established, 5-year-old tattoo on his arm developed spontaneous dermographia (figures 1 and 2). His labs were significant for a positive PCR swab for SARS-Cov-2, mildly elevated creatinine phosphokinase (CPK) to 961 units/L (normal: 0–340 units/L) and mildly elevated liver enzymes with aspartate transaminase (AST) of 84 international units/L (normal: 0–37) and alanine transaminase (ALT) of 72 international units/L (normal: 0–50); the remainder of his labs, including COVID-19 and myositis-related inflammatory markers, were normal. A complete blood count was also normal but an automated cell line differential did show a slight elevation in monocytes to 12.1% (normal 2.0%–10.0%) while lymphocytes showed normal absolute and relative percentages. The rheumatology and dermatology services evaluated for a possible dermatomyositis reactivation but the rash and dermographism were ultimately attributed to an exanthem caused by SARS-Cov-2 virus. His liver enzymes and CPK levels normalised over the next 24 hours, he demonstrated no further progression of his COVID-19 symptoms, and was discharged. He was prescribed fluocinonide 0.05% ointment and reported slow resolution of his dermographia over the next several weeks.

At 6 weeks follow-up, the lesions over the sun-protected areas had resolved, but he had interval development of new photo-distributed erythematous poikiloderma with heliotrope, progressive fatigue and CPK re-elevation. He was subsequently confirmed with a dermatomyositis flair in rheumatology clinic and started on an immunosuppressive regimen; he remains well.

Viral exanthems are a common manifestation associated with many viral illnesses. Unlike other beta-coronavirus infections which are not typically associated with dermatological manifestations, SARS-Cov-2 virus is frequently associated with cutaneous phenomena.1 Case definitions and terms are not yet formalised at this early point in the pandemic which makes diagnostic description a challenge. Recently, classification schemes have been proposed for the cutaneous manifestations of COVID-19: pseudochilblain, vesicular, urticarial, maculopapular and livedo or necrosis.1 We describe a unique urticarial manifestation of SARS-Cov-2 presenting with a mixed, diffuse urticarial and vesicular rash which included the dermographic outline of a well-established tattoo.

Learning points

► Exanthems are a common manifestation of viral illnesses, which may present variably and multiply in COVID-19.
► Dermographism may be an additional cutaneous manifestation of SARS-Cov-2 infection.

Figure 1 Dermographic outline of a well-established tattoo in acute COVID-19 disease.

Figure 2 Dermographic outline of tattoo, alternate angle.

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