

Fever and acute urticaria in a young male patient

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A 23-year-old man presented to our emergency department with a new onset of low-grade fever associated with diffuse itching urticarial rash localized to his trunk and upper limbs. He denied respiratory and gastrointestinal symptoms. Peripheral oxygen saturation was 98% at room ambient. His past medical history was unremarkable, and he was not taking any medications. No history of allergies was reported. He denied traveling abroad, contact with animals, ingesting raw meat or fish, or taking medicine. Laboratory results showed leukopenia with lymphocytopenia and normal C-reactive protein value. Eosinophils were normal. Hepatic and renal tests were all within the normal range. He was vaccinated with 3 doses of Comirnaty vaccine with no adverse reactions. Lung ultrasound showed A pattern without pleural effusion. The patient was discharged with oral steroids (prednisone 25 mg for three days with a progressive reduction in 10 days) and oral antihistamine (bilastine 10 mg daily for 10 days), and acetaminophen 1 gr if fever above 37.5°C, with complete resolution of the rash without sequelae in 10 days.

Question

Given the clinical presentation and medical history, what is the most likely diagnosis for the rash shown in the pictures?

- 1) stress urticaria
- 2) dermatitis herpetiformis (Duhring's Disease)
- 3) viral exanthem rash
- 4) monkeypox rash

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Availability of data and materials: All data underlying the findings are fully available upon reasonable request to Giorgia Borio, giorgia.borio1991@gmail.com.

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Informed consent: The patient provided consent for the access to medical records at the time of admission.

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Answer

Viral exanthem rash is the correct answer. A nasopharyngeal swab for SARS-CoV-2 was performed and resulted positive. A diagnosis of COVID-19 related urticarial rash was done. Skin rash can be an extrapulmonary manifestation of COVID-19, as well known for other viruses.¹ The two most frequent COVID-19 cutaneous lesions (16-19%) are urticarial rash and angioedema.²⁻⁴ Urticarial rash mainly involves the trunk and the limbs, and generalized itching is an accompanying common symptom. Hives usually appear simultaneously with systemic symptoms of COVID-19, and mean rash duration is about 7 days.^{2,3} These features seem to be associated with medium-high severity of COVID-19 even though no clear correlation between the cutaneous phenotype and the severity of COVID-19 has been found so far.⁵ No clear pathogenetic mechanism has been identified, but a role of hyperactive immune response, complement activation, and microvascular injury has been postulated.⁶ Few histopathological studies are available and mainly report vacuolar interface dermatitis.⁷ Therapy is based on low-dose systemic corticosteroids combined with non-sedating antihistamines.⁶ The resolution is generally complete without sequelae, as reported in our case.

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