

Unilateral laterothoracic exanthem in association with coronavirus disease 2019



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INTRODUCTION

Since the first reported case in December 2019, the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has affected more than 10 million people and claimed over 500,000 lives worldwide. Although SARS-CoV-2 is widely recognized as a respiratory pathogen, an increasing number of dermatologic manifestations of the virus exist. Here we report a case of a unilateral laterothoracic exanthem in association with SARS-CoV-2.

CASE REPORT

In March 2020, a 42-year old woman with no significant medical history was admitted to the hospital 7 days after known coronavirus disease 2019 (COVID-19) exposure with nausea, relentless vomiting, a headache, and 3 days of a predominantly right-sided rash. Her SARS-CoV-2 nasopharyngeal swab was positive.

Upon arrival to the hospital, she was afebrile and hemodynamically stable. She denied any respiratory symptoms but reported ageusia and anosmia. On physical examination, she was noted to have abdominal tenderness and a rash. The eruption consisted of dozens of thin pink papules coalescing into thin pink plaques on the posterior lateral trunk near the axillae bilaterally, with the right side more affected than the left (Fig 1). The rash also extended to the upper lateral right thigh and right lateral lower leg without any involvement of her palms, soles, or mucous membranes. She did not have any involvement of mucosal sites and had no evidence of bullae, vesicles, or purpura. She reported mild pruritus without any pain. The patient denied the use of

Abbreviations used:

COVID-19:	coronavirus disease 2019
SARS-CoV-2:	severe acute respiratory syndrome coronavirus 2
UTLE:	unilateral laterothoracic exanthem

any new prescription medications or skin products. She reported taking acetaminophen prior to the onset of her rash. Because of hospital restrictions, a biopsy was not obtained, as a panel of dermatologists determined that this would be unlikely to change the management of her rash.

The patient's initial laboratory data showed a complete blood count of $3.5 \times 10^3/\mu\text{L}$, an absolute lymphocyte count of $0.3 \times 10^3/\mu\text{L}$, and an eosinophil count of 0.6%. Her C-reactive protein was elevated to 91.9 mg/L, ferritin was 317 ng/mL, lactate dehydrogenase was 285 U/L, alanine aminotransferase was 30 U/L, and aspartate aminotransferase was 39 U/L. Her chest radiograph showed bilateral multifocal hazy opacities. The patient was treated with hydroxychloroquine, 400 mg twice a day for one day followed by 200 mg twice a day for 4 days for COVID-19. She was started on triamcinolone 0.1% cream for her rash with clinical and symptomatic improvement after a total duration of 5 days.

DISCUSSION

Given the right-sided predominance and flexural distribution, this rash is most consistent with a unilateral laterothoracic exanthem (UTLE). UTLE is typically characterized by a unilateral, periflexural exanthema that often involves the axillae and

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Fig 1. Thin pink papules coalescing into plaques on the posterior lateral trunk near her right axilla.

spreads to the contralateral side over time.¹ Individual cases of UTLE in association with Epstein Barr virus and parvovirus B19 have been reported.² UTLE is typically preceded by nonspecific systemic symptoms, including low-grade fever, diarrhea, or rhinitis. Although most often seen in children, UTLE can affect adults.

The differential diagnosis in this patient with known SARS-CoV-2 infection included viral exanthema and exanthematous drug eruption. However, UTLE has not been associated with medications. Although acetaminophen is a rare cause of exanthematous drug eruptions, the time course of this eruption after 2 days of medication administration and resolution while on acetaminophen would be exceedingly quick. The morphology of the rash could be consistent with symmetric drug-related intertriginous and flexural exanthema but the patient's rash improved while she was on acetaminophen, making this diagnosis much less likely. Many cases of UTLE are initially mistaken for contact dermatitis because of the unusual distribution. Pathology of UTLE is nonspecific, similar to viral exanthema and exanthematous drug eruption, and typically shows mild spongiosis with variable lymphocytic perivascular infiltrates. UTLE typically self-resolves with supportive care within 3 to 6 weeks without recurrence.

Since the beginning of the COVID-19 pandemic, an increasing number of cutaneous manifestations of the virus have been reported. In a single-center retrospective review from Italy, 88 patients with cutaneous manifestations of the virus were

identified. The authors report that 18 (20.4%) patients had cutaneous manifestations at the onset of the disease and 10 (11.4%) patients following their hospitalization. The most common finding was an erythematous rash (14 patients, 15.9%) widespread urticaria (3 patients, 3.4%), and vesicular rash (1 patient, 1.1%). The trunk was the main involved region with no association between rash and disease severity. Smaller case series report a purpuric rash often on extremities caused by SARS-COV-2-mediated complement-associated vascular injury.³ Another report describes a symmetric flexural exanthem originating in the antecubital fossae, similar to symmetric drug-induced flexural exanthem.⁴ More recent reports of a Kawasaki-like disease associated with COVID-19 have occurred in children.^{5,6} However, the rash in our patient was different in morphology and spared the hands and feet. Additionally, our patient's rash started with the onset of illness and faded with the resolution of her COVID-19 symptoms, which is not consistent with the timeline of this Kawasaki-like illness.

Based on our literature search using Medline and PubMed, this is the first case report of UTLE associated with SARS-COV-2. Given the novelty of this virus and the lack of data about its cutaneous manifestations, future observational studies are needed to further understand the full spectrum of skin disease associated with COVID-19.

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