ous involvement or other severe systemic complications. In summary, this case report supports the hypothesis that LCH and AML cells may originate from a common clonal myeloid precursor and that tumor lineage switching via transdifferentiation may explain the association between cutaneous LCH and myeloid blood cancers in these settings.

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Published Online: May 6, 2020. doi:10.1001/jamadermatol.2020.0544

Conflict of Interest Disclosures: Dr Kharfan-Dabaja has served as a consultant for Daiichi Sankyo and Pharmacyclics. Dr Foran has received personal fees from Agios, Pfizer, Stemline, Novartis, and AbbVie and grants from Boehringer Ingelheim, Xencor, Kura, Takeda Millennium, and Actinium. No other conflict of interest disclosures were reported.

Additional Contributions: We thank the patient for granting permission to publish this information.


Digitate Papulosquamous Eruption Associated With Severe Acute Respiratory Syndrome Coronavirus 2 Infection

In December 2019 in Wuhan, China, a novel coronavirus, designated as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), caused an international outbreak of respiratory illness termed coronavirus disease 2019 (COVID-19). Common symptoms include fever, fatigue, cough, and shortness of breath.1 Although most cases result in mild symptoms, it is estimated that around 5% of patients develop severe pneumonia and multiorgan failure.2 A recent Italian study3 reported a spectrum of cutaneous eruptions with nonspecific features in more than 20% of a small cohort of patients with COVID-19. We report a case of a digitate papulosquamous eruption occurring during a SARS-CoV-2 infection.

Report of a Case | An elderly patient with type 2 diabetes, hypertension, peripheral artery disease, and chronic renal failure was admitted to the intensive care unit in the spring of 2020 for acute respiratory distress. One week earlier, the patient had felt some fatigue with fever and dyspnea, which did not improve after treatment with cefpodoxime at a dose of 200 mg twice a day for 5 days. Computed tomography of the chest showed bilateral peripheral ground-glass opacities with subpleural condensation. A nasopharyngeal SARS-CoV-2 reverse transcriptase–polymerase chain reaction (RT-PCR) confirmed the diagnosis of COVID-19.

One day after hospital admission, the patient developed a squamous and erythematous periumbilical patch (Figure 1A) with rapid progression of other similar digitate scaly thin plaques on the lateral side of the trunk and thighs. Some lesions on the upper arms (Figure 1B), shoulders, and back were papular. This digitate papulosquamous eruption was clinically reminiscent of pityriasis rosea. A skin biopsy of the left shoulder revealed foci of spongiosis with focal parakeratosis, edema, and T-cell infiltration. The patient had a laboratory-proven respiratory infection caused by SARS-CoV-2. Results of blood tests, including HIV serologic tests, treponemal and nontreponemal antigen tests for syphilis, tests for cytomegalovirus infection, and Mycoplasma pneumoniae PCR, were negative, whereas Epstein-Barr virus (EBV) PCR results were positive, with a viral load of 4.6 log_{10} copies/mL reflecting EBV replication. Serologic markers indicated reactivation and ruled out acute mononucleosis. The cutaneous rash resolved spontaneously within a week. The patient died of COVID-19-related illness.

Discussion | To our knowledge, this is the first published observation of a digitate papulosquamous eruption in the setting of SARS-CoV-2 infection. The association between SARS-CoV-2 infection and this eruption is presumptive. Although the patient had a laboratory-proven respiratory infection caused by SARS-CoV-2, the RT-PCR result from the skin sample was negative for SARS-CoV-2, which fits our current understanding of the tissue specificity of the virus. The skin symptoms could be a secondary result of the immune response against the virus. Most patients with severe cases of COVID-19, as in our case, demonstrate elevated levels of proinflammatory cytokines and infection-related biomarkers.4 Alternatively, we did not find supportive evidence of a cutaneous drug reaction, considering that the cefpodoxime treatment (half-life, 2 hours) was stopped more than 30 hours before onset of the eruption, which did not evoke a drug-related rash. The eruption also dif-
fered from classic pityriasis rosea owing to the absence of an initial oval erythematous plaque with a scaly collarette termed herald patch and the early spontaneous resolution of the cutaneous lesions over a weeklong period. Although our test results showed reactivation of EBV, which can be observed in the setting of other viral infections, we did not suspect that the rash in this patient was related to EBV.

Our observation can be included in the complex category of paraviral dermatoses. Owing to the current COVID-19 pandemic, clinicians should be aware of this new potential association.

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Conflict of Interest Disclosures: None reported.


Petechial Skin Rash Associated With Severe Acute Respiratory Syndrome Coronavirus 2 Infection

The coronavirus disease 2019 (COVID-19) pandemic is filling the headlines these days. Although it is known that severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) may be associated with skin manifestations, a limited number of images are available in the literature at this time.
This observation reports dermatologic findings associated with a confirmed case of COVID-19.

**Report of a Case** | A 48-year-old man with a history of hypertension presented to the emergency department in March 2020, during the COVID-19 outbreak in Madrid, Spain. He reported an onset of fever (up to 39 °C) several days before admission, along with pleuritic chest pain and shortness of breath. He noticed the abrupt appearance of slightly pruritic skin lesions 3 days after the onset of fever. He had not taken any new drugs during the year before this episode.

Physical examination revealed confluent erythematous macules, papules, and petechiae in a symmetric periflexural distribution affecting the buttocks, popliteal fossae, proximal anterior thighs, and lower abdomen. A striking absence of lesions in the crural folds was noted (Figure 1). There were no acral or mucosal lesions.

Posterioanterior and lateral chest radiographs showed ground-glass opacities in both lower pulmonary fields consistent with atypical pneumonia. A complete blood cell count revealed a lymphocyte count of 750/μL (reference range, 1000-4500/μL) (to convert to x10^9/L, multiply by 0.001), a C-reactive protein level of 1.7 mg/dL (reference range, 0-0.5 mg/L) (to convert to mg/L, multiply by 10), and a D-dimer level of 0.68 μg/mL (reference range, 0-0.5 μg/mL) (to convert to nmol/L, multiply by 5.476). The platelet count and coagulation parameters were normal. Serologic test results were negative for HIV, hepatitis B virus, hepatitis C virus, and parvovirus B19. Results of real-time reverse transcriptase–polymerase chain reaction from a nasopharyngeal swab were positive for SARS-CoV-2.

A 5-mm punch biopsy specimen from the left buttock revealed a superficial perivascular lymphocytic infiltrate with abundant red cell extravasation and focal papillary edema, along with focal parakeratosis and isolated dyskeratotic cells. No features of thrombotic vasculopathy were present (Figure 2).

The patient was hospitalized and treated with hydroxychloroquine (200 mg twice a day), lopinavir-ritonavir (200 mg/50 mg twice a day), and azithromycin (250 mg/d). The patient continued to receive his regular hypertension medication, telmisartan. The rash was treated with 0.05% betamethasone dipropionate cream twice a day and loratadine (10 mg/d). The cutaneous lesions resolved after 5 days. The patient recovered from his respiratory illness and was released from the hospital after 12 days.

![Figure 1. Clinical Presentation at the Emergency Department](https://jamanetwork.com/)

![Figure 2. Histopathologic Findings](https://jamanetwork.com/)

The exanthem consists of erythematous macules, papules, and petechiae affecting the popliteal fossae (A), buttocks (A and B), and anterior thighs (C).
Discussion | To our knowledge, there is only 1 other report of per-etheal skin lesions in a SARS-CoV-2-infected patient, initially believed to have dengue fever. 1 Other coronaviruses such as human coronavirus NL63 have been associated with purpuric eruptions, including acute hemorrhagic edema of infancy. 2 During the COVID-19 outbreak in China, dermatologic symptoms were regarded as possible comorbid conditions, drug reactions, or occupational skin diseases 3—unrelated to SARS-CoV-2.

Viral rashes can be polymorphic. In this patient, the clinical picture resembled the periflexural petechial exanthem of parvovirus B19. Skin biopsy specimens from patients with this disease show a perivascular mononuclear inflammatory infiltrate, eosinophils, and extravasated erythrocytes; in addition, viral proteins from parvovirus B19 have been found within the endothelial cells of dermal vessels and could be implicated in the pathogenesis of purpura. 4 We hypothesize that SARS-CoV-2 could affect the skin in a similar way. Some histologic features in this case (ie, mounds of parakeratosis, mild spongiosis, extravasated erythrocytes) overlap with those of pityriasis rosea, which is suspected to have a viral pathogenesis. 5 Adverse drug reactions to supportive medications used in patients with severe viral infections are an important diagnostic consideration; however, in this case the rash preceded the initiation of lopinavir-ritonavir and hydroxychloroquine.

Sharing the images of this case may benefit physicians dealing with similar rashes in undiagnosed patients during this pandemic. We hope that, in the upcoming months, skin rashes associated with COVID-19 will be better understood.

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Conflict of Interest Disclosures: None reported.

Additional Contributions: We thank the patient for granting permission to publish this information. We also thank Carmen Moreno García del Real, MD, PhD (Department of Pathology, Ramon y Cajal University Hospital), for the histopathologic analysis and all of her kind support during the redaction of the manuscript.


COMMENT & RESPONSE

Explanation of Errors in Population Numbers and Missing Data in Studies of Lifetime Skin Cancer Associated With Sexual Orientation and Gender Identity

To the Editor We write to report errors that occurred in 2 studies that we published online on February 12, 2020, and in the April issue of JAMA Dermatology: “Association Between Sexual Orientation and Lifetime Prevalence of Skin Cancer in the United States” 1 and “Gender Identity and Lifetime Prevalence of Skin Cancer in the United States.” 2 These were cross-sectional studies that analyzed data from annual Behavioral Risk Factor Surveillance System (BRFSS) surveys of adults aged 18 years and older who self-identified as being heterosexual, gay, lesbian, or bisexual from 2014 through 2018. Both measured self-reported lifetime history of skin cancer. The first study 1 evaluated the association between sexual orientation and lifetime prevalence of skin cancer, and the second study 2 evaluated skin cancer history by gender identity. In the first article, we reported that gay and bisexual men had an increased self-reported lifetime prevalence of skin cancer compared with the prevalence among heterosexual men. In the second article, we reported that compared with cisgender men, gender nonconforming individuals, but not transgender men or women, had a higher self-reported lifetime prevalence of skin cancer.

Soon after our articles were published online in JAMA Dermatology, another researcher who was also examining data from the 2014-2018 BRFSS surveys informed us of a few discrepancies in our first article, including the overall population numbers. Because of this, we looked into our data collection and realized that our data set was missing information from all years of Connecticut, 1 year of Iowa, and 1 year of Arizona over the 2014-2018 period. After reperforming our analysis with these states included, our numbers matched those of the individual who had reached out to us. In addition, there was an error in how we reported missing data in Table 1 of the first article 1 because we had not included numbers for those who had been missing data on alcohol use, as these data were added to our model later.

Correcting for these errors affects the number of states listed in the Methods sections, numbers in the Results sections, and the Tables of both articles. 1,2 For example, the total number of participants changes from 845 264 to 877 650 in the first study. 1 In the second article, the study sample changes from 368 197 to 382 216. 2 The number of states included changes from 37 to 36. Although many of the specific numbers in our results change with the addition of the corrected data, none of the findings—either positive or negative—change after the addition of these data. In our study focusing on sexual orientation, 1 our