

# Isolated Skin Rash in Patient With Coronavirus Disease 2019: A Case Report of Skin Manifestation in COVID-19 Virus Disease

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**Abstract-** Coronavirus Disease 2019 was initially identified as an infection of the lower respiratory tract but has so far manifested itself with very different symptoms. One of these symptoms is skin lesions associated with an active viral infection that can occur from the onset of infection until treatment. Therefore, observing these skin manifestations can be helpful in diagnosing and managing the disease. Our case is a 56-year-old man who came to the infectious clinic with a chief complaint of skin rashes. The patient was in good general condition on arrival and had no evidence of systemic symptoms of infection, such as fever, body aches, and cough. However, the PCR test for COVID-19 was positive. Although many dermatological findings have been reported with Coronavirus Disease, this case has reported with no symptoms other than skin manifestations that describe a viral infection. It seems that this disease can cause unexpected symptoms, even in mild cases. Therefore, it is better to have the COVID-19 in the corner of your mind when examining people with these symptoms.

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**Keywords:** Coronavirus disease 2019 (COVID-19); Skin manifestations; Skin rash

## Introduction

In late December 2019, unexpected cases of lower respiratory tract infection were initially reported from the Chinese city, Wuhan. Similar cases of this disease were increased for a short time. In February, the World Health Organization (WHO) has announced the emergence of a new member of the coronavirus family called the Acute Respiratory Syndrome Virus 2 (SARS-COV-2) and called this newfound disease a Coronavirus Disease 2019 (COVID-19). Following the rapid and widespread outbreak of the virus worldwide, the pandemic of this disease was announced on March 11, 2020 (1,2).

COVID-19 was initially diagnosed with respiratory symptoms such as coughing, shortness of breath, body aches, and fever, with also reports of involvement of other organs such as the cardiovascular and gastrointestinal systems (3). Although some case reports of skin manifestation have been reported in patients with

COVID-19 who were admitted to ICU, there was no verified data about the process of skin symptoms in this disease (4). Due to the possibility of drug reactions and virality of the disease, a known relation between this respiratory infection and skin disorders has not yet been established and it is in a state of ambiguity (5). Unexpectedly, here we introduce a patient that referred to Imam Sadegh infectious disease clinic in Jahrom city with erythematous skin rashes.

The purpose of this report is to introduce skin manifestation as the only symptom which appears in a patient with a positive test for COVID-19.

## Case Report

A patient 56-year-old man who complained of a skin rash and came to an infectious disease clinic. Four days before the visit, the patient accidentally noticed about 10 small red rashes on his abdomen. Over time, the rashes

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got bigger, but there were painless and non-itchy. He reported blisters about 4 mm in diameter, and a red halo around them was 3 mm. The patient did not complain of fatigue, body aches, coughs, and shortness of breath. He had a history of hyperlipidemia and Grade 2 fatty liver since several years ago. He also had a past history of gastric ulcer and laparoscopic removal of gallbladder due to gallstones and acute cholecystitis. However, the patient did not report a history of food or drug allergies or autoimmune diseases. The patient mentioned the use of Rosuvastatin and Acetylsalicylic acid (A.S.A) in his medical history for two years. Recently, he has been consuming Celexib 100 mg daily for the last few days because of tendonitis, but due to an increase in blood pressure, the drug was completely discontinued by the order of his doctor.

The patient was not ill in general appearance and was also aware and alert to time, place, and person. His vital signs are as follows:

BP: 110/75, PR: 77, RR: 20, T: 36.7, O<sub>2</sub> SAT: 95%

Examination of the head and neck, no evidence of lymphadenopathy, inflammation of the mouth or gums, congestion, or redness of the eyes was seen. On chest examination, auscultation of heart sound was normal, and both lungs were not reduced in sound or any extra sound, such as rales and wheeze. Examination of the abdomen did not show any findings except the skin rashes mentioned. To describe skin manifestations, as you can see in Figure 1, there were several well-defined erythematous rashes on the trunk. Also, the vesiculopustular lesion that vesicles were similar to vesicles of smallpox. Some of them were crusted.



**Figure 1.** Cutaneous findings in a 56-year-old man with a positive COVID-19 test result. Initial presentation: erythematous rash on chest and abdomen 3 days after the positive test

According to the large number of patients in this city and similar skin symptoms that were observed in patients with COVID-19, a sample of the nasopharynx and oropharynx swap was taken for polymerase chain reactive (PCR) test due to suspicion of COVID-19. After the PCR test was positive, for the absence of other symptoms, home quarantine was started for our patient without being prescribed a specific drug until developed of the symptoms and complications, be reported immediately by the patient.






One week later, as you can see in Figure 2, the rash

spread from the trunk to the patient's arms, forearms, and thighs. But they had never been seen on the face and limbs, and the lesion was limited to the skin, without mucosal involvement. During this time, the patient did not present with any respiratory or systemic symptoms and only complained of an increase in the diameter of the rash and its redness. After 14 days, these rashes reached their peak and then began to subside. Finally, the patient said that after a few weeks, all the lesions disappeared completely without any residual scar. We summarized all this data's in Tables 1 and 2.



**Figure 2.** one week later: erythematous rash reached its peak and spread to the arms

**Table 1. The sequence of the symptoms' appearance and persistence, their relationship with the timing and results of the oropharyngeal swabs**

Symptoms	Week 1	Week2	Week 3	Week 4
Skin rash				
Vesicular lesion				
Pustular lesion				
Crust				
Swab (RT-PCR)				

**Table 2. Signs and symptoms of the disease are summarized**

Systemic symptom	Nothing
Skin lesion	Diffuse (papulovesicular lesions)
Skin symptom	No itching
Duration	4 weeks
Localization	Trunk then limbs

## Discussion

There is clear evidence of systemic inflammatory responses to COVID-19, suggesting that the disease can cause end-organ damage (6). Common symptoms that lead to clinical suspicion include COVID-19 include fever, fatigue and body aches, dry cough, anorexia, shortness of breath, runny nose, and loss of sense of smell and taste. Paraclinical findings such as Chest X-Ray and Chest CT-Scan are helpful in diagnosing and tracking the progression of the disease. Also, in laboratory findings, we can expect lymphopenia and increased LDH. Finally, a PCR test with nasopharyngeal or oropharyngeal swabs can finalize the diagnosis of COVID-19 (7).

For the first time in March, Recalcati reported skin rashes in the form of erythematous rashes, extensive urticaria, and smallpox-like vesicles in a patient with COVID-19 in Italy (7). Other reports of petechiae, purpura, livedo reticularis, and acro-ischemic lesion have also been published. The scene of the conflict was, in most cases, the trunk. The rashes were not itchy or slightly itchy and healed after a few days (8). No association has been observed in the incidence of skin rash and disease exacerbation. However, based on the available data, it can be guessed that cutaneous manifestations in COVID-19 are similar to cutaneous manifestations in common viral diseases (9).

In a study conducted in Italy on skin manifestations in 88 COVID-19 patients, about 18 (20.4%) had skin manifestations, of which 16% were erythematous rashes, 3% were extensive urticaria, and 1% were chickenpox-like vesicles. And they all involved the trunk area.

Symptoms of cutaneous manifestations developed in 8 patients as soon as they started and in 10 patients after hospitalization. These findings suggest that these skin lesions are expected at any time in a patient with a diagnosis of COVID-19 and at any time in the course of the disease (10).

In our patient, skin manifestations initially occurred in the trunk area due to the absence of other symptoms, which led us to drug side effects. But it was unbelievable; he tested positive for COVID-19. While the patient had no history of contact with anyone with symptoms or COVID-19. In fact, these rashes, which appear three days after the test is positive and peak after a week, and spread to other parts of the body, could indicate a viral course caused by the COVID-19 virus.

As we all know, COVID-19 is a viral infection that can cause variable systemic and inflammatory symptoms due to the virulence caused by this pathogen. However, it is a rare case in which PCR test was positive for COVID-19, and skin rashes were the only symptom of COVID-19 that presented. A previous study in Jahrom city shows a high rate of diabetic patients among COVID-19 patients (11). Despite other reports in which skin manifestations are associated with other symptoms of COVID-19, in our report, he did not develop the common manifestations such as fever, lethargy, cough, or any of the other rare manifestations of COVID-19. Therefore, it is better to have this disease as one of our differential diagnoses in the corner of your mind when examining people with these symptoms because it seems that this disease can cause unexpected symptoms even in mild cases.

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