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# Skin Rash May be a Symptom of COVID-19 Infection: A Case Report and Further Review of Literature

*Dr. Pradip Kumar Das & Dr. Eshita Das*

## ABSTRACT

During the pandemic of SARS-CoV-2 infection, the sudden appearance of skin rash in a patient with no other underlying cause to explain its clinical manifestation can invite the attention to the physicians to think about a possible coronavirus infection. The possibility of a skin rash being an early sign of an underlying SARS-CoV-2 infection should be considered in the context of the patient's epidemiological risk profile and the local epidemiological situation. It is relevant to co-relate that skin rashes with itching are now reported as rare signs of the coronavirus disease. Further study is awaited to augment current knowledge about epidemiology, clinical presentation, and pathogenesis of COVID-19 skin manifestations. In this backdrop, it is needed to formulate for the case of sudden appearance of an isolated skin rash can justify the SARS-CoV-2 infection especially in daily clinical practices and can indicate of home isolation and/or further testing to identify the presence or not of SARS-CoV-2 infection.

**Keywords:** SARS-Cov-2- severe acute respiratory distress syndrome caused by Covid-19 virus, Covid-19-novel coronavirus infection started in december 2019 at wuhan of china.

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# Skin Rash May be a Symptom of COVID-19 Infection: A Case Report and Further Review of Literature

Dr. Pradip Kumar Das<sup>α</sup> & Dr. Eshita Das<sup>σ</sup>

## ABSTRACT

*During the pandemic of SARS-CoV-2 infection, the sudden appearance of skin rash in a patient with no other underlying cause to explain its clinical manifestation can invite the attention to the physicians to think about a possible coronavirus infection. The possibility of a skin rash being an early sign of an underlying SARS-CoV-2 infection should be considered in the context of the patient's epidemiological risk profile and the local epidemiological situation. It is relevant to co-relate that skin rashes with itching are now reported as rare signs of the coronavirus disease. Further study is awaited to augment current knowledge about epidemiology, clinical presentation, and pathogenesis of COVID-19 skin manifestations. In this backdrop, it is needed to formulate for the case of sudden appearance of an isolated skin rash can justify the SARS-CoV-2 infection especially in daily clinical practices and can indicate of home isolation and/or further testing to identify the presence or not of SARS-CoV-2infection.*

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## I. INTRODUCTION

Common manifestations of Covid-19 infection are fever, dry cough and shortness of breath, body ache, weakness, chest pain, loose motions, loss of taste in the tongue and loss of smell in the nose since the Covid-19 infection was declared a pandemic by the World Health Organization in March 2020, it has been more or less established

in recognizing the symptoms of this viral infection. But with the advancement of study works in this field, more information about Covid-19 has come to light, new symptoms have been marked as being associated with the disease and are now helping healthcare professionals to diagnose and treat this disease in a congenial way. It has been shown by a study at King's College London and Zoe Global Ltd shows that skin rashes might be an additional symptoms and are a valuable indicator of Covid-19 infection in untested patients showing just one other classic symptom of the disease. It has been evident from a study in the *Journal of the American Academy of Dermatology* in March revealed that a COVID-19 positive patient presented with a skin rash similar to ones that appear in dengue<sup>7, 8</sup>. It is also established from another study from the Cleveland Clinic done in April 2020 that 20 percent of their COVID-19 patients had presented rashes of different varieties, including patchy red rashes, hives and chickenpox-like blisters in their trunk area<sup>3</sup>. Doctors in Thailand also observed dengue-like rashes on positive patients, while those in other countries also observed mottling.

## II. CASE DESCRIPTION & DISCUSSION

A 30-year-old obese lady, residing at Panchanantala, Konnagar, Hooghly of State of West Bengal under the country of India, working as a Branch manager of a centralized bank of Paschim Midnapore District under the State of West Bengal of India presented in the private clinic on 13th May 2021 with one day history of headache but no fever with pain in the throat followed by loss of smell in the nose and loss of taste in the tongue <sup>1, 2</sup>. After that appearance of dot like red spots in the thighs, legs, lower abdomen and in infra-mammary regions with

dot like red spots in the thighs, legs, lower abdomen and in infra-mammary regions with itching persisting for 2-3 days then disappeared<sup>3</sup>. The patient had no symptoms of fever, cough, shortness of breath, or general malaise. In her personal history, she did not declare any travel abroad in the last 15 days. Due to the second wave infections highly prevailed in the state of West Bengal, swab tests for SARS-CoV-2 were recommended along with routine blood tests and chest x-ray etc. RT-PCR test was shown positive result. On her physical examination, it was noted normal Blood Pressure (130/94 mm of Hg), Pulse rate (77/m) and normal temperature (98.4 Degree Farenheight), normal respiration rate (18/m). Body weight-124 kg, markedly obese. On her GI, CVS, Respiratory and Nervous system examination, did not show any abnormality or any tenderness or enlargement of the submandibular, preauricular, or cervical lymph nodes. The patient declared that she used personal protective equipment during close contact with customers while she was on duty works in bank. Her chest computed tomography and chest X-ray showed no significant parenchymal lesion in the lungs, both hila were normal, cardiac shadow was within normal, diaphragm & angles were normal. The routine blood examination showed levels of fasting glucose (112 mg/dl), C-reactive protein (09.00 mg/L), AST (26 U/L), ALT (32 U/L), LDH (194 U/L), and lymphocytes % (25%). She was started on taking systemic Ivermectine 12 mg and Azythromycin (500 mg) OD for 5 days, Levocetazine 5 mg daily for 5 days and Calamine Lotion thrice daily and instructed to self-quarantine until the complete resolution of the infection. Because of the infectious nature of COVID-19, she maintained quarantine protocols as per Government instructions.

### Differential Diagnosis

Scabies, a skin infestation caused by the mite *Sarcoptes scabiei*, is a frequent cause of severe pruritus. Here cause of pruritus is due to a delayed hypersensitivity reaction to the mite proteins<sup>10</sup>. But in this case the patient gave no history of contracting scabies or the skin burrows could not be elicited in her skin folded areas. Thus scabies can be opted from the diagnosis. Another

common cause of itching is an adverse drug reaction. It is fact that Drug-induced skin reactions may be a trouble making task to differentiate from patients of COVID-19 with skin manifestations. It is also true that, so many medicines are being used to treat COVID-19 in both hospital setup and private chambers, and many of them may be the culprit to cause itching with skin rashes<sup>9</sup>. So it is very difficult to identify the underlying causes between COVID-19 infection and skin rashes when managing with patients who have received these medications. In this case, an adverse drug reaction can be excluded on the fact that the patient did not consume a COVID-19-specific drug treatment. Moreover, her skin rash was the first manifestation of the disease and the patient had no history of recent or chronic drug intake. Other common causes of skin rashes with itching could be excluded by absence of history of no use of cosmetics and soaps, living in unhealthy environments or absence of chronic physical or mental stress. Patient had also no personal or family history of autoimmune illness, atopy<sup>7</sup>.

### III. CONCLUSION

In light of present studies, this case report suggests that skin manifestations, in the backdrop of consideration with other situational factors such as her profession and personal history should be taken as possible cause of SARS-CoV-2. Thus present study envisages the primary care case report of a female patient who presented with skin rash as the main clinical presentation of COVID-19. Early detection of COVID-19 is a main criteria of case identification and case isolation. To augment this activity, further study is needed to establish symptoms and signs, pathogenesis of skin manifestations in patients with COVID-19<sup>8</sup>.

### REFERENCE

1. Tong JY, Wong A, Zhu D, Fastenberg JH, Tham T. The prevalence of olfactory and gustatory dysfunction in COVID-19 patients: a systematic review and meta-analysis. *Otolaryngol Head Neck Surg.* 2020; 163:3–11
2. Giacomelli A, Pezzati L, Conti F, Bernacchia D, Siano M, Oreni L, Rusconi S, Gervasoni C,

- Ridolfo AL, Rizzardini G, et al. Self-reported olfactory and taste disorders in SARS-CoV-2 patients: a cross-sectional study. *Clin Infect Dis.* 2020; 71(15):889–90.
3. Recalcati S. Cutaneous manifestations in COVID-19: a first perspective. *J Eur Acad Dermatol Venereol.* 2020; 34(5):e212–3.
  4. Sachdeva M, Gianotti R, Shah M, Bradanini L, Tosi D, Veraldi S, Ziv M, Leshem E, Dodiuk-Gad RP. Cutaneous manifestations of COVID-19: report of three cases and a review of literature. *J Dermatol Sci.* 2020; 98:75–81.
  5. Wollina U, Karadağ AS, Rowland Payne C, Chiriac A, Lotti T. Cutaneous signs in COVID 19 patients: a review. *Dermatol Ther.* 2020; e13549. <https://doi.org/10.1111/dth.13549>.
  6. Galván Casas C, Català A, Carretero Hernández G, Rodríguez-Jiménez P, Fernández-Nieto D, Rodríguez-Villa Lario A, Navarro Fernández I, Ruiz-Villaverde R, Falkenhain-López D, Llamas Velasco M, García-Gavín J, Baniandrés O, González-Cruz C, Morillas-Lahuerta V, Cubiró X, Figueras Nart I, Selda-Enriquez G, Romaní J, Fustà-Novell X, Melian-Olivera A, Roncero Riesco M, Burgos-Blasco P, Sola Ortigosa J, Feito Rodriguez M, García-Doval I. Classification of the cutaneous manifestations of COVID-19: a rapid prospective nationwide consensus study in Spain with 375 cases. *Br J Dermatol.* 2020;183(1):71–7.
  7. Fernandez-Nieto D, Jimenez-Cauhe J, Suarez-Valle A, Moreno-Arrones OM, Saceda-Corralo D, Arana-Raja A, Ortega-Quijano D. Characterization of acute acral skin lesions in nonhospitalized patients: a case series of 132 patients during the COVID-19 outbreak. *J Am Acad Dermatol.* 2020;83:61–3.
  8. Freeman EE, McMahon DE, Lipoff JB, Rosenbach M, Kovarik C, Desai SR, Harp J, Takeshita J, French LE, Lim HW, et al. The spectrum of COVID-19-associated dermatologic manifestations: An international registry of 716 patients from 31 countries. *J Am Acad Dermatol.* 2020;83:1118–29.
  9. Reich A, Stander S, Szepietowski JC. Drug-induced pruritus: a review. *Acta Derm Venereol.* 2009;89:236–44.
  10. Bhat SA, Mounsey KE, Liu X, Walton SF. Host immune responses to the itch mite, *Sarcoptes scabiei*, in humans. *Parasit Vectors.* 2017;10:3



Erythematous skin rash in lower portion of right leg



Red coloured spotted rash in upper left thigh



Erythematous papular skin rash in lower portion of left leg



Red spotted papular rash in lower abdomen