Dermatological manifestations during COVID-19 pandemic – Case series from Nepal

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ABSTRACT

SARS CoV-2 infection primarily targets the respiratory system, but other organs, including skin can also be affected with varied manifestations. The most common dermatological findings of COVID-19 include urticarial, maculopapular rash, papulovesicular exanthema, chilblain-like acral pattern, livedoreticularis-like pattern and purpuric "vasculitic" pattern. Here, we present a case series with skin findings in COVID-19 from Nepal.

Keywords: COVID-19, skin manifestations, urticaria, maculopapular rash, pityriasis rosea, herpes labialis

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INTRODUCTION

The world was brought to a halt after SARSCoV-2 infection, which started in December 2019 from China and was declared a pandemic by world health organization in March 2020. Though its primary target is the respiratory system, other organs, including skin can also be affected with varied manifestations.[1]

The clinical pattern of COVID-19 associated skin manifestations is classified into six main types: i) urticarial rash, ii) confluent erythematous/ maculopapular/morbilliform rash, iii) papulovesicular exanthema, iv) chilblain-like acral pattern, v) livedoreticularis/ racemosa-like pattern and vi) purpuric "vasculitic" pattern.[2]

The first article on the skin manifestations of coronavirus disease was published in February 2020 in China which mentioned that the skin rash was a rare manifestation presenting in 0.2%.[3]
A large data on cutaneous manifestations in COVID-19 was published in May 2020 by Recalcati S. from Italy.[4] Recalcati collected the data from 88 hospitalized patients with COVID-19, out of which 18 patients (20.4%) developed cutaneous manifestations.

So far, there are only few case reports on skin manifestation of COVID-19 published from Nepal[5-6] and in this article, the authors have described four case series with different dermatological manifestations of COVID-19.

CASE REPORTS

Case 1

A 34-year-old female doctor presented with skin rash of two days' duration. Three days before developing skin rash, she had mild sore throat, body ache with cough. But she was afebrile. On the third day, she developed conjunctivitis of both eyes. On fourth day, there were urticarial rashes on her cheeks and periorbital region, which were non-pruritic. The rashes on her cheeks increased on the fifth day, along with similar rashes on her thighs. On examination of the face, there were erythematous plaques on bilateral periorbital region with swelling of eyelids and congestion of bilateral eyes. On the neck, there were wheals and on thighs, there were maculopapular eruptions. With the history and dermatological findings, the diagnosis of viral exanthem was made and was prescribed tab. Cetirizine 10mg once daily for two weeks, along with calamine lotion to be applied over the affected areas and Tab. Paracetamol 500mg to be taken SOS. COVID-19 RT-PCR was positive and complete blood count (CBC) was within normal range. The rashes continued to spread, with few lesions on the abdomen and forearms, but her palms, soles and scalp were spared. The lesions had now become pruritic, which was disturbing her sleep. On the sixth day, she was prescribed Tab. Prednisolone 20mg that was tapered gradually over a period of two weeks. Conjunctivitis resolved within 2 days after starting tab. Prednisolone but urticarial rashes took around 2 weeks to disappear. She also had 4-5 episodes of diarrohea per day since day 8 which lasted for 4-5 days. (Figure 1a, 1b and 1c).

Case 2

A 9-year-old female child was consulted via telemedicine for pruritic wheals of one-day duration (figure 2). There was no history of known exacerbating factors. She had sore throat four days back, without fever or malaise. She did not take any medicine for sore throat as it started decreasing from the very next day just by gargling and drinking hot water. Her mother was also having myalgia and headache for 2 days. So, the patient, along with her mother was advised to do RT-PCR for COVID-19 and both of them were detected positive. The skin lesions disappeared gradually after 3 days with oral fexofenadine

Case 3

A 32-year-old male, businessman, consulted for asymptomatic rash on the trunk for 4 days along with fever of 100°F since one day. On examination, there were erythematous oval annular plaques mainly on his shoulders, left flank and upper trunk, following skin creases (figure 3). The patient was clinically diagnosed with pityriasis rosea and was advised for COVID-19 RT-PCR as he had fever, which came out to be positive. For the skin lesions, he was given moisturizers, to be applied twice daily and then referred to a physician for the management of COVID-19. The skin lesions improved after 10 days. This patient was also consulted and managed through telemedicine.

Case 4

Tele-consultation was done for a 14-year-old female, who developed grouped vesicular eruption below the left side of her lower lip, which became purulent within two days (figure 4). She had mild fever and diarrhea for 2 days before the development of skin lesions. She was diagnosed with Herpes labialis and was prescribed topical Fusidic acid cream to be applied twice daily for 1 week and was advised for COVID-19 RT-PCR, which was detected to be positive. The lesion started to improve after two days of application of Fusidic acid cream and resolved completely after seven days.

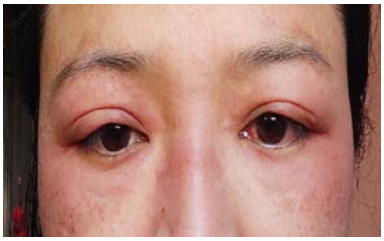

Figure 1A. Conjunctivitis with periorbital oedema and erythematous plaques

Figure 1B. Wheals on the neck

Figure 1C. Maculopapular rashes on thighs

Figure 2. Wheals on the trunk

Figure 3. Erythematous annular plaques on right shoulder and anterior axillary fold

Figure 4. Herpes Labialis

DISCUSSION

COVID-19 is a multisystem disease and development of skin lesions can be an advantage to early suspicion of the disease in some cases.[7]

We have reported four cases, two children and two adult patients, with various dermatological manifestations of COVID-19. All of them were suspected of having COVID-19, only after they consulted for their skin problem. None of these patients were vaccinated against COVID-19. The cutaneous manifestations that we encountered were urticaria, pityriasis rosea, herpes labialis, and maculopapular rash with conjunctivitis of both eyes.

By now, it is well reported that urticarial rashes are very common in COVID-19. In one of the preliminary reports on cutaneous manifestations of COVID-19 by Recalcati S, where 18 out of 88 patients had skin manifestations, three patients were of urticaria.[Error! Bookmark not defined.] Casas CG et al stated that 19% of their COVID-19 cases had urticarial rashes.[8] Genovese G et al have grouped the cutaneous manifestations of COVID-19 into six main clinical groups and urticaria was the most frequent, as various viral and bacterial agents can trigger urticaria.[Error! Bookmark not defined.]

In a prospective study from China and Italy by De Giorgi V et al, they found that the most common skin finding was erythematous rash (70%), followed by urticarial (26%) and vesicular and varicelliform eruptions (4%).[9] In the publication of Casas CG et al., 47% had maculopapular eruptions that included perifollicular macules and papules, which were also noted on the thighs of one of our patients, and they also described pityriasis rosea in some patients.[Error! Bookmark not defined.] Pityriasis rosea, was first reported in an elderly COVID-19 patient by Sanchez A, from France.[10]

Ophthalmologic manifestations are a well-known feature of COVID-19. Conjunctivitis or watering of eyes could be the first and only findings in a patient with COVID-19.[11] In a systemic review and meta-analysis of ocular manifestations of COVID-19, done by Nasiri N et al, which included 38 studies and 8219 patients, found that the most prevalent ocular disease was conjunctivitis (88.8%).[12]

All, except one of our patients were consulted via telemedicine using Viber mobile platform, as they were unable to visit the hospital due to ongoing nationwide lockdown. After the initial in-person consultation, follow-up of Case 1 was also done via Viber.

All of these patients recovered completely and without any sequelae.

This shows, how important and helpful telemedicine can be in situations like this.

Many specialties have been giving consultations through telemedicine, especially during this pandemic. Ohannessian R, et al. writes that telemedicine was helpful in previous outbreaks as well, which includes former coronavirus outbreaks such as SARS-CoV (severe acute respiratory syndrome–associated coronavirus) and MERS-CoV (Middle East respiratory syndrome coronavirus) and they have called-out to adopt telemedicine globally, in this pandemic and future outbreaks.[13]

CONCLUSION

Cutaneous manifestations in COVID-19 are common and it could help early diagnosis of COVID-19. Telemedicine needs to be promoted, especially in a country like Nepal and at times like this ongoing pandemic, where travelling is prohibited, as it can greatly reduce the health burden in patients.

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