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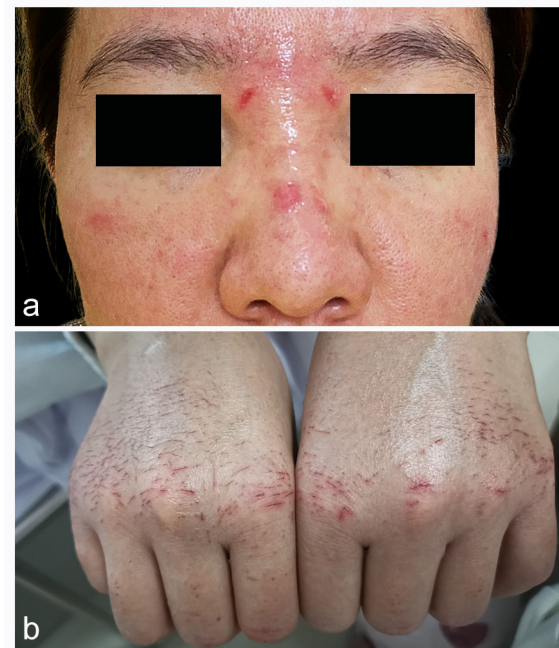


Figure 1 Skin lesions of healthcare workers treating patients with 2019 novel coronavirus disease Pneumonia: Erosions on the forehead, nasal bridge and zygomatic bone, after wearing medical masks and goggles working for 8 h (a). Rhagades and bleeding on dorsal aspects of hands with intense itching, after repeatedly washing and frequently using of alcohol and disinfectants (b).

2019 novel coronavirus disease epidemic: skin protection for healthcare workers must not be ignored

Dear Editor,

Since first reported in 2019, pneumonia associated with 2019 novel coronavirus disease (COVID-19) has rapidly developed into an outbreak across the world.¹ The number of patients of all age groups has increased significantly.² In order to curb the spread of the epidemic, thousands of healthcare workers (HCWs) have joined the front line of the fight against this highly contagious disease.³ When taking care of patients with COVID-19 pneumonia, HCWs must first protect themselves by performing adequate hand hygiene and using protective equipment including medical mask, goggles/face shield, gown and gloves.⁴ However, the wearing of these personal protective equipment (PPE) on a daily basis and the frequent use of hand disinfectants often cause skin problems, which could reduce their enthusiasm for overloaded work and make them anxious at all stages of the pandemic.

Skin injuries caused by PPE. N95 masks, goggles and face shields can squeeze and rub the cheek, forehead and nasal bridge, which may easily cause mechanical damage to the skin, leading to indentations, ecchymosis, maceration, abrasion and erosion (Fig. 1). Nasal bridge was the most commonly affected (83.1%).⁵ If the ulceration is not properly managed, secondary infections may occur, opening a ‘window’ for virus invasion. Frequently disinfecting the hands and the wearing of latex gloves may result in pompholyx, presenting with blisters and itching. The long-time wearing of protective clothing may cause sweating, which can lead to dermatitis and folliculitis. Frequent use of shoe covers may also cause fungal infections of the feet. Skin injuries caused by PPE were significantly associated with frequency and time of medical devices wearing. For those in high-intensity protective gear, shorter rotating shifts would reduce the incidence of skin injuries.

Skin injuries caused by disinfectants. After exposure to fat-soluble disinfectants such as 75% alcohol, chlorine-based disinfectants, peroxyacetic acid and chloroform, HCWs may develop adverse reactions (e.g. allergic contact dermatitis). Because of the high infectivity of COVID-19,⁶ the stressful HCWs may

excessively increase the frequency and duration of skin cleaning, which may damage the skin barrier and lead to desquamation, rhagades, and even itching or bleeding (Fig. 1). These skin problems undoubtedly increase the already heavy burdens of these HCWs. Facial skin is at high risk of exposure to virus particles and should be rinsed with clean water after rubbing with cleansers, while the risk of hair and body skin is relatively low and once-a-day cleaning is enough. Hand hygiene is extremely important. The hands should be washed before and after wearing PPE or contacting with COVID-19 patients, and after exposure to contaminated items.⁷ Soap-based cleansers and synthetic cleansers can be used. Excessive washing of the skin and repeated application of disinfectants (e.g. bleach and alcohol) should be avoided.

When skin injuries occur, HCWs should check whether there is excessive pressure when using the PPE. If there are eczema-like changes, a glucocorticoid cream or ointment can be applied topically. When ulcers followed by secondary bacterial or fungal infections occur, an antibiotic ointment or antifungal drug may be applied on the skin lesions and covered with wound dressings. Dry skin caused by long-time use of PPE can be alleviated by non-irritating creams or emulsions (e.g. hand creams and skin moisturizers containing urea or ceramide) with long moisturizing time.

With COVID-19 spreading in countries all over the world, all HCWs need to be prepared for cases in their hospitals and communities. The skin care of our healthcare colleagues, which preserves the workforce vital for caring for patients with the disease, should be paid close attention to. This is an important subject that dermatologists should be working on in the battlefield against COVID-19.

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Occurrence of SARS-CoV-2 during mycophenolate mofetil treatment for pemphigus

Editor

We read with great interest the article entitled 'Should SARS-CoV-2 influence immunosuppressive therapy for autoimmune blistering diseases?' published by Di Altobrando *et al*. in the JEADV.¹ This is the first report of CORonaVirus Disease 2019 (COVID-19) in a patient affected by autoimmune blistering disease (ABD) during immunosuppressive treatment (i.e. azathioprine).

The authors conclude that it is crucial to learn of more cases of ABD patients under immunosuppressive treatment who have developed COVID-19, in order to better quantify the risk of infection under immunosuppressive therapy.

Also, in our clinical practice, we suspended all follow-up visits and, in accordance with the directives of the Regional Health Service, we contacted all scheduled patients by phone.

We called a total of 43 patients: 30 affected by bullous pemphigoid, nine by pemphigus and four by mucous membrane