

LETTER TO THE EDITOR

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The role of occupational dermatology in the COVID-19 outbreak

To the Editor:

The current coronavirus disease 2019 (COVID-19) emergency is highlighting the importance of occupational dermatology.¹ It is known that in emergency medicine and disaster management, skin diseases may be frequent not only in victims, but also in rescuers.² The current COVID-19 pandemic demonstrates that health-care workers (HCWs) are particularly affected by skin problems. Although not a severe disease, skin problems often have a significant impact on emergency management, as they are potentially able to reduce the effective workforce.

HCWs caring for COVID-19 patients have to wear for many hours, on a daily basis, specific personal protective equipment (PPE) and are therefore susceptible to PPE-related adverse skin reactions.³ It has been reported that up to 97% of HCWs showed skin lesions related to the enhanced protection measures, mainly affecting the nasal bridge, cheek, forehead, and hands.^{1,3,4} The facial lesions are secondary not only to the prolonged use of N95 FFP3 masks, but mainly to goggles, which were implicated in most injuries. Hand hygiene with alcohol-based hand rubs is widely used as one of the most effective, simple, and low-cost procedures against COVID-19 cross-transmission.⁵ By denaturing proteins, alcohol inactivates enveloped viruses, including coronaviruses, and thus alcohol-based formulations with at least 60% ethanol have been proven effective for hand hygiene.⁵ Moreover, HCWs may perform frequent handwashing with water and soap more than 10 times per day. Because coronavirus was found to survive for several hours on used PPE, double gloving can reduce the risks of viral contamination during PPE removal and is therefore recommended.³ These procedures may lead to hand dermatitis with symptoms that can vary from quite mild to debilitating, including dryness, irritation, itching, and even fissuring and bleeding.^{1,3,4}

The problem of hand dermatitis is very important for many aspects. First, hand dermatitis due to frequent washing may create a route of entry for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2); indeed, angiotensin-converting enzyme 2, the receptor for the virus, is richly expressed in the skin on blood vessels, basal cells, hair follicles, eccrine glands.⁴ Second, dryness, skin irritation, and itching can be debilitating and cause absence from work and impair work productivity, with important consequences during the pandemic. Therefore, basic skin care measures should be taken after hand washing to address these aspects.³ To this end, several measures to avoid hand dermatitis, maceration, and erosion due to PPE and handwashing during the pandemic have been proposed.⁴ Although the application

of hand cream/moisturizers on intact skin after hand washing is recommended,⁶ only 22.1% applied hand creams after washing.^{3,4} Education of HCWs regarding proper skin care management may be effective in preventing occupational skin disorders. For HCWs at risk of hand dermatitis to hygiene products, additional skin moisturizing may be needed. Hand lotions and creams often contain humectants, fats, and oils that increase skin hydration and replace altered or depleted skin lipids that contribute to the barrier function of the skin. No product, however, is free of potential risk, especially contact allergy. Hence, it is usually necessary to provide an alternative for use by individuals with sensitivity or reactions to the hand hygiene product available in the institution. Finally, to safeguard hygiene rules, disposable packaging is recommended.

CONFLICTS OF INTEREST

M.N. acted as speaker for Sanofi; G.F. acted as speaker and consultant for AbbVie and Leo Pharma; L.S. acted as speaker and consultant for AbbVie, Almirall, Celgene, Lilly, Novartis, and Sanofi; C.P. acted as speaker and consultant for AbbVie, Novartis, Pfizer, and Sanofi.

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