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Rational hand hygiene during the coronavirus 2019 (COVID-19) pandemic



To the Editor: The enhanced preventive measures during the SARS-CoV-2 coronavirus disease 2019 (COVID-19) pandemic include proper hand hygiene. Health care workers (HCWs) may perform frequent handwashing with water and soap, leading to the potential complication of skin damage. In Lan et al's survey¹ of 526 front-line COVID-19 HCWs, 74.5% reported damage to hand skin from enhanced infection prevention measures. HCWs who washed their hands more than 10 times per day reported more damage to hand skin (odds ratio, 2.17). This skin damage creates a route of entry for COVID-19, and basic skincare measures should be taken after handwashing to address this.

Notably, the cell receptor for SARS-CoV-2 entry, angiotensin-converting enzyme 2 (ACE2), is abundantly present in blood vessels/capillaries of the skin, the basal layer of the epidermis, and hair follicles. ACE2 is also present in eccrine glands.²

Yan et al.³ discuss several measures that can be done to avoid hand eczema, maceration, and erosion due to PPE and handwashing during the pandemic. Qualified sanitizers with ethanol as the main component are prioritized for hand decontamination, and the application of hand cream/moisturizers on intact skin after hand washing is instructed.³ During handwashing, overly-hot water can lead to contact dermatitis and should therefore be avoided.

Hypoallergenic moisturizers, gloves, and alcoholic hand sanitizers are vital to prevent hand eczema. Educational intervention about hand-eczema risk factors—such as frequent hand washing, surgical scrubbing, and prolonged glove use—was shown to promote hand-skin health among HCWs.⁴

Due to the risk of hand-skin damage, rational hand-hygiene measures respectful of the skin along with proper use of protective gloves and

moisturizers must be instructed to HCWs during the fight against COVID-19.

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