Occupational skin disease among health care workers during the coronavirus (COVID-19) epidemic

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In this issue of the JAAD, Lan et al[1] report a high incidence of cutaneous complications related to prevention measures among health care workers treating patients with epidemic coronavirus (COVID-19) infection. It may be difficult to continue wearing protective gear in the face of cutaneous ulceration, and attempts to shift points of pressure and abrasion may reduce the effectiveness of the protective mask.

The prevalence of skin damage related to enhanced prevention measures was 97.0% (526 of 542) among frontline health care workers and included cutaneous lesions affecting the nasal bridge, hands, cheek, and forehead. The nasal bridge was the most commonly affected site (83.1%). As expected, frequent hand hygiene was associated with a higher incidence of hand dermatitis, but the length of time wearing the face shield was not significantly associated with the risk of facial lesions. It was not the N95 mask alone but rather goggles that were implicated in most injuries.

Their data offer valuable insights to help modify infection control practices to avoid occupational injuries. Shorter rotating shifts in high-intensity protective gear may reduce the incidence of skin ulceration, but goggle fit may be more important and preemptive measures have the potential to preserve the workforce and reduce the risk of infection among hospital workers.

History is rife with examples of cutaneous lesions reducing the effective workforce and even changing the tide of history.[2] Approximately half of the United States forces in the Mekong Delta were immobilized by skin conditions during portions of the Vietnam conflict,[3] with inflammatory tinea, immersion foot, and intertrigo among the most prevalent conditions. Skin disease accounts for a large proportion of occupational injury and days lost from work, with health care workers reporting a high incidence of occupational skin disease.

Atopy, winter season, low humidity, frequency of hand washing, wet work, glove use, and duration of employment are important risk factors for hand dermatitis among medical personnel, and positive irritant patch tests with a low concentration of sodium lauryl sulfate can predict those at highest risk.[4,5] Despite recognition of the scope of the problem, there is a lack of published literature on effective measures to reduce the incidence of occupational skin injury among physicians and nurses.[6] Latex-free gloves are now standard in many hospitals and clinics, and efforts to reduce repetitive exposure to low-level irritants have potential to decrease occupational skin disease.[7]

Outbreaks of COVID-19 are now being reported across the globe, and all physicians need to be prepared for cases in their communities. We can learn from the experience of those who have fought this infection on the front lines. The prevalence of skin disease related to protective equipment is high, and simple interventions, including the use of adhesive barrier films before donning protective gear, may help preserve the workforce vital for caring for patients with the disease.

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