

Seborrheic dermatitis and anti-COVID-19 masks

Dear Editor

In Milan, Italy, after the end of the lockdown period (March and April 2020), we observed several patients with seborrheic dermatitis (SD) who showed a more or less important worsening of their disease. In a group of 43 patients with SD who had been visited from December 2019 to February 2020, a worsening in 20 of them (46.5%) was seen. They were 15 males (75%) and 5 females (25%), with an age ranging from 23 to 48 years (mean age: 36.7 years). All patients used anti-coronavirus-19 (COVID-19) face mask for 6-10 hours per day; 7 out of 20 patients (35%) were physicians, obstetricians, or nurses. According to the clinical point of view, the worsening was characterized by increased erythema and desquamation (Figures 1 and 2). Fourteen out of 20 patients (70%) stated that also itching worsened.

In the last few weeks, some articles have been published on cases of dermatitis of the face associated with the use of anti-COVID-19 masks.¹⁻⁵ In a Chinese study, it was observed that 49% of subjects reported skin reactions on the face related to mask. Itch (14.9% of patients), erythema (12.6%), and dryness (11.6%) were the most frequent manifestations. Furthermore, 43.6% of patients with acne, 100% of patients with rosacea, and 37.5% of patients with SD reported exacerbation of their diseases.¹ A Polish study demonstrated that itching associated with the use of face mask was present in 19.6% of subjects. In particular, subjects with atopic dermatitis, SD, and acne were at significantly higher risk of itching development. Furthermore, subjects who wore masks for many hours per day reported itching more frequently.² A case of occupational allergic contact dermatitis caused by formaldehyde and 2-bromo-2-nitropropane-1,3-diol (bronopol) contained in a polypropylene surgical mask was published.³ In another Chinese study, it was observed a



FIGURE 2 Worsening of SD associated with long-time mask wearing

significant increased flare of acne in individuals with long-time mask wearing (>4 hours per day over 2 months). The authors hypothesized that this condition is due to high temperature of the face covered by the mask that induces an increased sebum excretion rate: The latter increases by 10% for each 1°C rise.⁴

In our patients with SD, it is possible that high temperature of the face induces abnormalities of microbiota (proliferation of *Malassezia* spp.?) and permeability of skin barrier and increases sweating with irritant action and worsening of itching.

CONFLICT OF INTEREST

The authors declare there are no conflicts of interest—financial or otherwise—related to the material presented herein.

INFORMED CONSENT

Informed consent and permission for publication of medical images were taken from the patient.

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FIGURE 1 Worsening of SD associated with long-time mask wearing

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