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Facial dermatoses in the general population due to wearing of personal protective masks during the COVID-19 pandemic: first observations after lockdown

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Since the COVID-19 (SARS-COV-2) pandemic began, a number of facial dermatoses, such as acne, rosacea and seborrhoeic dermatitis, secondary to prolonged use of personal protective equipment (PPE) have been reported in frontline healthcare workers.[1] By contrast, when we performed a retrospective report on 4 May 2020 of 'emergent' diagnoses during the lockdown period in our Dermatology Unit (Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy) we did not observe an increasing number of facial dermatoses among the general population.[2] However, on this date, the Italian government moved to Phase 2 of the pandemic crisis, which allowed people to more freedom in daily life but with the obligation, in most Italian regions, to cover the mouth and nose with a facemask. Consequently, the usage time of PPE greatly increased and shortly afterwards, the first mask-induced facial dermatoses in people who were not healthcare workers came to our attention.

Patient 1 was a 32-year-old woman, who developed a persistent bilateral erythematous rash on her cheeks 2 weeks after the end of lockdown (Fig. 1a). She reported a history of facial flushing and a usage time of an N95 mask for 6 h/day because she shared a workplace with two other people. We made a clinical diagnosis of rosacea and prescribed doxycycline 40 mg for 12 weeks, which provided clinical benefit.

Patient 2 was a 24-year-old woman diagnosed with occlusive acne. Clinical examination showed numerous inflamed papules, pustules and microcomedones located on the chin and jaws bilaterally (Fig. 1b). She had a history of facial seborrhoea but she had never developed similar acne lesions. She worked as barmaid and used a facial mask and goggles for the entirety of her 8-h work shift. Treatment consisted of daily application of adapalene 0.1% plus benzoyl peroxide 2.5% gel for 8 weeks, with zinc gluconate 175 mg and nicotinamide 27 mg daily for 3 months.

Patient 3 was a 29-year-old man with acute exacerbation of seborrhoeic dermatitis. Erythema and greasy scales appeared on the patient's nose, cheeks and beard (Fig. 1c), areas covered by the facial mask. He was treated with low-potency steroid cream for 5 days followed by pimecrolimus 1% ointment daily application for another 10 days.

Facial dermatoses are common diseases for dermatologists; however, there are some challenging aspects to face with during the COVID-19 pandemic. Even though it has been demonstrated that facial protections induce

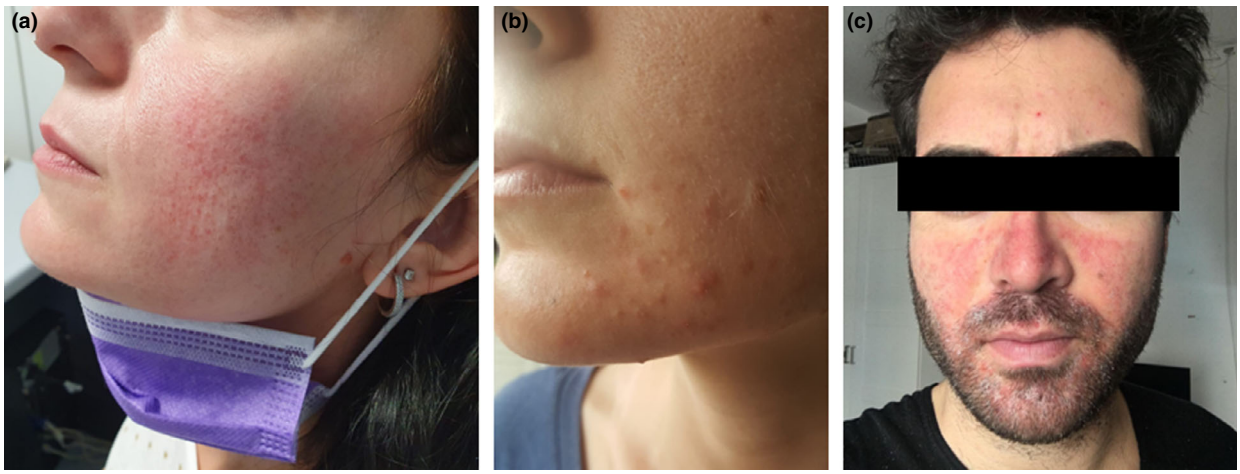

Figure 1 Common facial dermatoses in general population, induced by protective mask: (a) rosacea; (b) acne; (c) seborrhoeic dermatitis.

occlusion and consequently a damp and warm microenvironment, which can cause or exacerbate these conditions,[3] physicians cannot suggest simply abandoning use of PPE; however, a surgical mask can be recommended instead of an N95 mask, if the work activity allows it. Suggested treatment should include recommendations on daily skin care, such as application of moisturizers before and after mask utilization. Treating these dermatoses may prevent also COVID-19 contagion, because facial skin damage causes pruritus, which may induce the wearer to scratch the face and/or to remove the mask,[4] with a consequent reduction in PPE effectiveness.

We report these cases to highlight that dermatologists must be aware of the risk of increasing incidence of facial dermatoses among the general population in Phase 2 of lockdown, due to occlusive effects of facial PPE.

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Rabies vaccination inducing eruptive lichen planus in a child

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An 8-year-old boy presented with sudden-onset generalized pruritic rash over his trunk and extremities for the last 6 days. He had recently been scratched by a stray dog (rabies category of exposure grade III) and had been started on a rabies vaccination schedule (Updated Thai Red Cross schedule; intradermal injection of 0.1 mL on Days 0, 3, 7 and 21). The patient had noticed the skin eruption 2 days after the third dose of rabies vaccine (Day 9). There was no history of recent drug intake or preceding infection prior to onset of lesions.

Physical examination revealed multiple discrete, polygonal, flat-topped, violaceous, papules and plaques with overlying Wickham striae distributed over the trunk, back, face and extremities (Fig. 1a,b). Koebnerization was noticed over the chest and right flank. Other mucocutaneous sites were uninvolved and the rest of the systemic examination was unremarkable.

Laboratory investigations, including complete blood count and routine biochemical parameters, were within normal limits. Serology testing for HIV and viral hepatitis markers gave normal results.

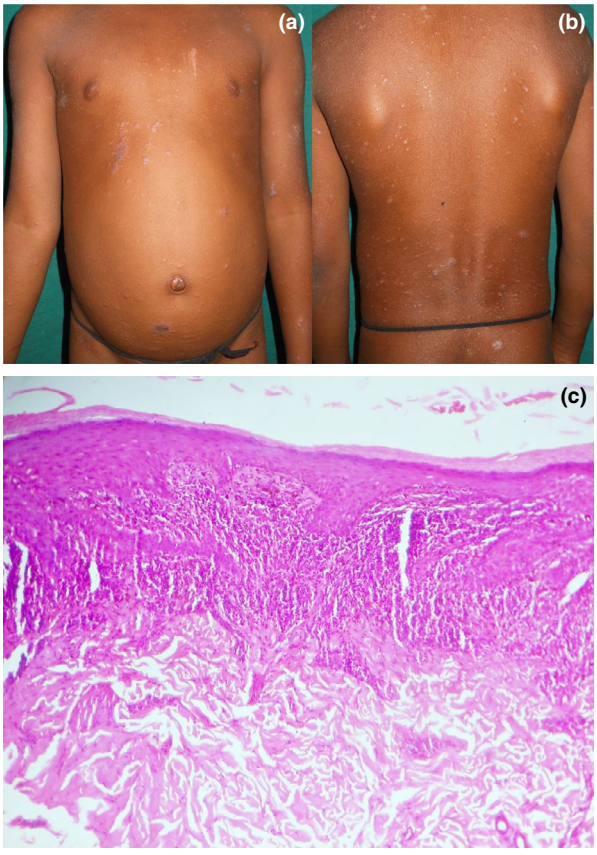

Figure 1 (a,b) Multiple discrete, polygonal, flat-topped, violaceous, papules and plaques distributed over the trunk with koebnerization over chest. (c) Band-like lymphocytic infiltration in the upper dermis, wedge-shaped hypergranulosis, lymphocytic infiltration and vacuolar changes in the basal layer (haematoxylin and eosin, original magnification × 400).