



Case Report

Mask-induced Koebner Phenomenon in Pemphigus Patients During COVID-19 Pandemic

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Abstract

Koebner phenomenon of skin diseases due to face masks have been reported since COVID-19 pandemic, especially in psoriasis patients. Although there are reports on Koebner phenomenon in pemphigus patients in the literature, pemphigus lesions triggered by face masks have not been described previously. Herein, we report one case of pemphigus vulgaris and one case of pemphigus vegetans with new and persistent lesions on the nose following prolonged use of face masks. Both cases had persistent pemphigus lesions on their noses where face masks irritated the most. The development of lesions after the use of masks and the persistence of nasal lesions despite the improvement of other skin lesions with the treatment in both cases, suggested that minor traumas due to the use of masks played a role in the formation of lesions.

Keywords: COVID-19, Koebner phenomenon, mask-induced Koebner, pemphigus

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The COVID-19 pandemic affected the lives of individuals in many ways and one of the consequences of the pandemic was the necessity to wear face masks regularly in public places. Wearing a mask is beneficial to limit the spread of the SARS-CoV-2. However, long-term use of masks has been shown to increase several facial dermatoses such as acne and rosacea.^[1,2] There are also published reports about Koebner phenomenon due to face masks, especially in psoriasis patients.^[3,4] Although there are reports on Koebner phenomenon in pemphigus patients, pemphigus lesions triggered by face masks have not been described previously. Herein, we report two cases of pemphigus vulgaris (PV) and pemphigus vegetans with new and persistent lesions on the nose following prolonged use of face masks. Informed consent from patients for sharing their detailed case history and images were obtained.

Our first case is a 56-year-old male patient with 3-year history of pemphigus vegetans. The disease activity had been under control with methylprednisolone 60 mg/day and rituximab. The first infusion of rituximab was administered on 17 February 2020 and methylprednisolone dose was gradually reduced and eventually ceased. The patient had no lesions afterward. However, four months after the COVID-19 pandemic started in our country, the patient referred to our dermatology outpatient clinic with new lesions on his nose where the mask irritated the most. The patient stated that he wears a mask for about 9 hours a day, five days a week. At the first examination, he had an eroded plaque with adherent crusts on his nose and he had no lesions on other parts of his body (Fig. 1). He was administered oral methylprednisolone 32 mg/day and azathioprine 100 mg/day. Two weeks later, the lesion showed mild improvement. Thus, azathioprine 100 mg/day

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and topical treatments were continued and oral methylprednisolone dose was gradually reduced to 8 mg/day.

Our second case is a 47-year-old male patient who referred to our clinic with erosive and crusted lesions on his nose (Fig. 2) and eroded lesions on his oral mucosa, along with similar lesions on his back and legs. These lesions first occurred on his nose and oral mucosa 8 months ago and he had applied to different clinics due to these complaints in the last few months, but a clear diagnosis had not been made. We performed a punch biopsy and direct immunofluorescence which revealed suprabasal cleavage with acantholysis and intercellular IgG and C3 deposition, supporting the diagnosis of PV. The patient stated that he wears face masks almost every day, up to 7-8 hours a day. Based on these results, methylprednisolone 48 mg/day and azathioprine 100 mg/day were started. During the one month follow-up period, the lesions on his nose did not improve significantly, while the lesions on other parts of his body showed great improvement. PV lesions do not typically involve the nose area; hence, we evaluated both lesions as mask-related Koebner phenomenon.



Figure 1. Large eroded plaque with adherent crusts on nose tip and both ala nasi.



Figure 2. Crusted erosions on nasal dorsum and right ala nasi.

In the literature, there are reports on Koebner phenomenon in pemphigus patients, mostly followed by surgical procedures, radiation, and burns.^[5] Additionally, Baykal et al.^[6] reported four cases of PV localized to the nose and cheeks. Although none of them had a history of trauma, the authors suggested that PV lesions localized to the nose and cheeks can be triggered or maintained by light exposure. On the other hand, in our cases reported here, both had similar lesions on the nose while their exposure to sun was minimal because of the restrictions due to COVID-19 and regular use of masks in daytime. The development of lesions after the use of masks and the persistence of nasal lesions despite the improvement of other skin lesions with treatment, suggested that minor traumas due to the use of masks played a role in the formation of lesions in these patients. Even though the Koebner phenomenon is rare in pemphigus, regular use of masks should be considered in this respect in pandemic conditions.

Disclosures

Informed consent: Written informed consent was obtained from the patient for the publication of the case report and the accompanying images.

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