

LETTER TO THE EDITOR

Face mask-induced purpura: another unexpected effect of COVID era

Editor

We recently came across an otherwise healthy 64-year-old woman who recently developed bilateral asymptomatic purpuric lesions on her face (Fig. 1). Purpura was located on the cheeks and distributed in a linear fashion following the direction of the borders of FFP2 face mask usually worn by the patient as protection against SARS-CoV-2 infection. Similar lesions, but with minor extent, were seen on the neck-chest area, where she wore a silver necklace. At clinical examination, apart from the above described purpuric lesions, sun-damaged skin was particularly evident.

The patient denied any previous drug intake or steroid application and her clinical history was unremarkable. Laboratory investigations including coagulation tests were within normal range.

On the basis of history and clinical appearance of cutaneous lesions, a diagnosis of face mask-induced purpura was made. As the patient noticed that the lesions had appeared after prolonged use of FFP2 face mask, she had autonomously started to wear surgical masks in order to reduce facial skin pressure and, after that, she was experiencing an improvement of her skin signs. She was reassured about the condition and she was suggested to wear, when possible, surgical face masks producing a minor pressure on facial skin.

Apart from the global impact induced by the COVID pandemic on health, politics, economics and lifestyle,¹ an indirect effect of new habits has been experienced by common people.

Face masks have accompanied mankind's life in the latest 2 years as they were indicated as mandatory tool to prevent the diffusion of SARS-CoV-2 infection.

Several large studies have investigated the effects of face masks on people's skin, thus demonstrating an increase of facial dermatoses or cutaneous symptoms secondary to face mask wearing.²⁻⁵ The former included acne, irritant contact dermatitis, seborrheic dermatitis, rosacea and allergic contact dermatitis, whereas among symptoms, patients reported itch, burning pain, dryness, oily skin, ear pain and others. Prolonged use of masks, mask type, previously existing conditions and mask reuse can be considered as the major factors conditioning the occurrence of facial cutaneous symptoms or diseases.

To the best of our knowledge, no patients with mask-induced facial purpura were reported in previous studies. Techasatian et al.⁵ observed in a minority of patients pressure-induced injury, but no detailed information was given about the skin signs produced by pressure.

Face is not among the most common sites of purpura, which is mostly seen on limbs or trunk. Purpura may have a large variety of aetiologies, including coagulation disorders, immune diseases, internal disorders, cancer, haematologic conditions, medication, trauma and many others.

The exclusive localization of purpura on the face does not have so many causes. Among them, the so-called mask phenomenon should be not confused with face mask-induced



Figure 1 Linear purpura of the cheeks (a, b). Correspondence between border of face mask and purpuric lesions (c).



Figure 2 The so-called mask phenomenon, that is postemesis facial purpura in an adolescent.

purpura observed in our patient. In fact, ‘mask phenomenon’ is a particular type of postemesis facial purpura due to the trauma favoured by vomiting (Fig. 2).⁶

In our patient, the linear fashion of purpura, the correspondence between purpuric streaks and border of facial mask, the occurrence after mask wearing, the absence of history of vomiting or coagulation abnormalities, and the absence of history of drug intake, made the diagnosis of mask-induced facial purpura the most probable.

We retained worth noting to describe what happened in our patient because of the uncommon sign likely secondary to face mask wearing. In our patient, the intense photodamaged skin may be a predisposing factor for the development of purpura, similarly to what is observed in Bateman’s purpura. As purpura is often associated to serious conditions, reassurance of patients presenting with face mask-induced purpura is advisable after necessary investigations.

COVID pandemic got us used to new ‘things’, including novel dermatologic signs,^{7,8} bizarre vaccine reactions,^{9,10} and unexpected previously unknown phenomena, such as mask-induced purpura which make our daily job even more complex and fascinating.

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Conflict of interest





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