



Figure 2 Reaction in right palm.

required for healthcare workers. Two of these individuals had a known IgE-mediated allergy to pollen, and one of them also had a contact allergy to nickel. Those with a history of IgE allergy had taken paracetamol (acetaminophen) prior to vaccination, and the other one had also taken cetirizine an hour before. All the reactions subsided in 24 h, due to which no biopsy specimen could, for practical reasons, be taken. All three had pain at the vaccination site for two days as another adverse event; two out of three also experienced some flu-like symptoms the following day.

We have no idea of the possible mechanism for the phenomena, but, interestingly, all patients were of the same age. Pollen allergy is very common in Finland, and the relevance of the atopic diathesis remains unclear. A delayed reaction to another mRNA-based vaccine (mRNA-1273) has been reported,¹ but the reactions described are of a classic inflammatory nature. A similar reaction has also been reported for the BNT162b2 vaccine.^{2,3} In a registry-based study with 414 reported cases with cutaneous reaction, altogether four cases of petechiae were reported⁴ but not described in more detail.

The reaction we now describe would suggest a haemosiderin pigmentation, but vanishes too rapidly to be explained as such. We suspect that this reaction is a local capillary leakage due to

the vaccination and some kind of immunologic reaction located in the dermis/epidermis junction.

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Conflict of interest

We have no conflict of interest to disclose concerning this work.

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Dermatoses caused by face mask wearing during the COVID-19 pandemic

Editor

We present 6 patients with different dermatoses caused by face mask wearing during the COVID-19 pandemic. Physical examination revealed lesions only under masks.

Two 20 years old females presented to our clinic with the pustules and papules on the face area. Due to the COVID-19 pandemic, the patients began to use neoprene mask with daily change. The first papules and pustules appeared in the mask area about two weeks of mask using. The diagnosis of mask induced acne ('maskne') was made (Fig. 1a-c).

Two 25 and 23 years old patients presented with irregular pink-yellow patches with sharp borders and small serous crusts. No concomitant disorders, professional harm and bad habits

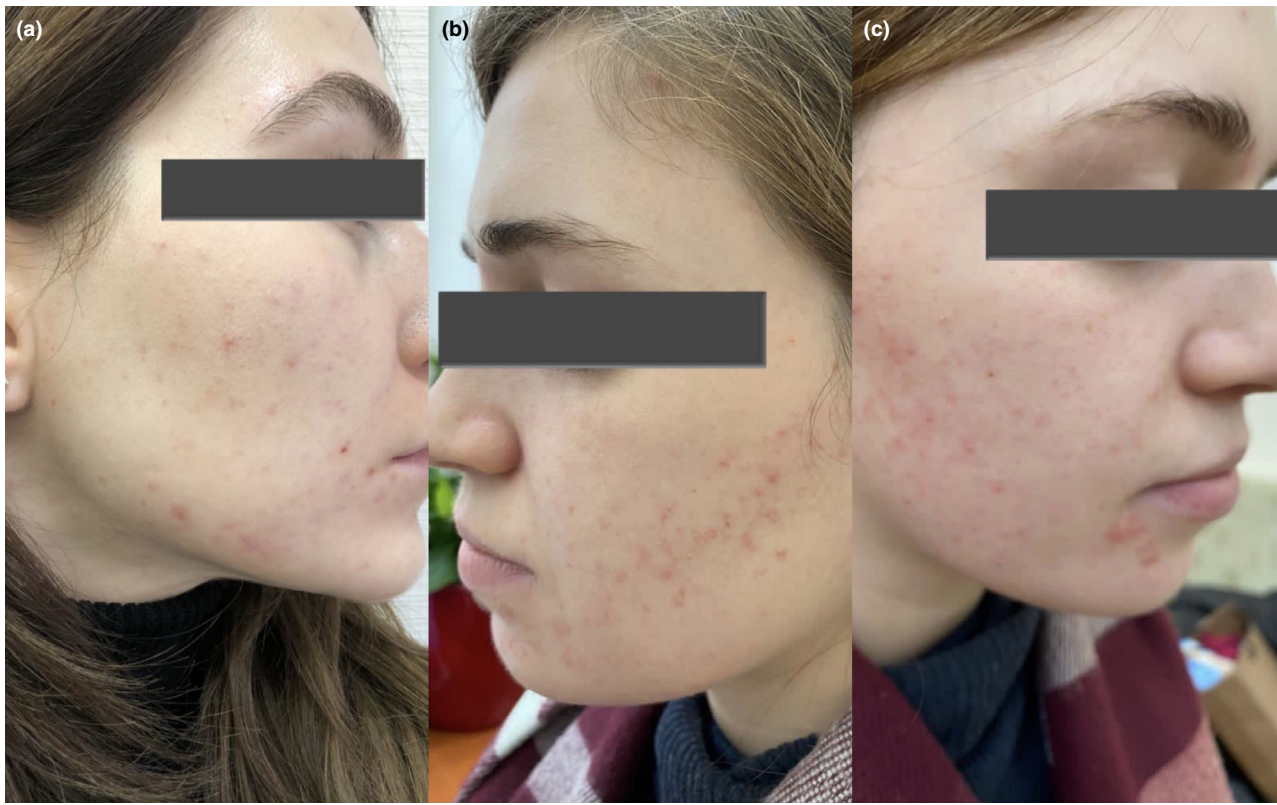


Figure 1 (a) Patient 1: A 20-year-old female with the pustules and papules on the chin, cheeks and nasal bridge; (b,c) Patient 2: A 20-year-old female with the pustules and papules on the chin, cheeks and nasal bridge.

(smoking, alcohol or drugs) were noted. The lesions had a week history after using mask during 9 months. The patients used neoprene masks changed only once a week. Clinical changes were consistent with the diagnosis of impetigo (Fig. 2a,b).

A 54-year-old woman had rosacea with central facial erythema with papulopustular lesions during three years. Minocycline and ivermectin (IVM) 1% cream treatment provided remission during 1.5 years. When the COVID-19 pandemic began, the patient used surgical mask that she changed every four hours. Prolonged use of masks provoked exacerbation of the rosacea. Over a 3-week treatment with IVM 1% cream, a marked clinical improvement was observed. During the next 4 months, the patient did not use mask, lived in a village, ordered groceries via internet and had a complete remission of rosacea. After quarantine, the patient moved to the city. The rosacea recurred with central facial erythema with papulopustular lesions under the mask (Fig. 2c).

A 50-year-old woman presented to the Dermatology Clinic with a rash around the mouth and the nose and complaints of burning. Physical examination revealed pink erythema with erythematous-grouped papules. The vermillion borders of the lips were spared. Clinical changes were consistent with the diagnosis

of perioral dermatitis (Fig. 2d). The rashes were associated with the beginning of mask wearing. First foci of erythema appeared a month later. The patient used surgical masks. She had chronic gastritis in remission.

Since the COVID-19 (SARS-COV-2) pandemic began, mask wearing like personal protective equipment (PPE) was advocated to prevent droplet dispersal during sneezing, coughing and talking.¹

Using masks as a part of PPE has become obligatory for not only healthcare professionals but every person.^{1,2} As of yet, several facial dermatoses such as acne, rosacea, seborrheic dermatitis, perioral dermatitis, impetigo as a secondary reaction to prolonged use of PPE have been sharply increased in the dermatologist practice.³⁻⁵

Due to the mask regimen, a new term 'maskne' was introduced for acne caused by mask wearing.^{2,6}

Prolonged mask use causes exacerbation of not only pre-existing facial dermatoses (acne, rosacea or perioral dermatitis) but also increases the incidence of acne mechanica, occupational dermatitis (both irritant contact dermatitis and allergic contact dermatitis) caused by the mask material and prolonged contact with straps. Increased warmth and dampness of the face skin due to expired air and sweating caused occlusive effect



Figure 2 (a) Patient 3. A 25-year-old male with irregular pink-yellow patches with sharp borders; (b) Patient 4. A 23-year-old male with irregular pink-yellow patches with sharp borders and multiple small serous crusts; (c) Patient 5. A 54-year-old female with central facial erythema and papulopustular lesions; (d) Patient 6. A 50-year-old female with pink erythema and erythematous-grouped papules on the chin, cheeks and nasal bridge.

hampering the skin hydration and irritating pilosebaceous glands ducts with changes in skin microflora.^{5,6} A lengthy daily non-changed mask wearing leads to *S. aureus* activation and causes an infection, for instance, impetigo.⁷

Mask-related lesions involve chin, cheeks and nasal bridge. These areas could be potentially a focus for preventative

measures.⁸ To avoid mask-associated facial dermatoses, dermatologists counsel patients with the help of mass media and individually regarding the proper skin hygiene: to avoid over cleansing, to use mild cleansers close to skin's natural pH (pH 5) and to add non-comedogenic moisturizing creams.⁶

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Small-vessel vasculitis following Oxford-AstraZeneca vaccination against SARS-CoV-2

Dear Editor,

The COVID-19 pandemic has caused significant economic and socio-sanitary effects on a global level. Its high transmission capacity coupled with the lack of effective treatment led to the rapid development of vaccines that, today, have been

administered in a wide list of countries. As a result, new postvaccination adverse events continue to be described.

A 57-year-old woman with a personal history of hypertension and hypothyroidism presented to the emergency room for skin lesions of 4 days of evolution. Five days prior to the onset of symptoms, she had received the first dose of the Oxford-AstraZeneca COVID-19 vaccine and within the next 24 h of the administration, she presented with a fever of up to 38.5°C, generalized myalgias and general malaise with local pain at the injection site that self-limited without treatment. She denied previous similar episodes or recent use of new drugs. She denied any associated systemic symptoms or having previously had SARS-CoV-2 infection. On examination, she presented confluent palpable purpura lesions in the buttocks and in a splashed way in the legs and arms, being in the latter location practically resolved (Fig. 1). Histological examination revealed an intact epidermis and, in the dermis, a neutrophil-predominant perivascular infiltrate with leukocytoclasia and some eosinophils, features consistent with small-vessel leukocytoclastic vasculitis (Fig. 2). Direct immunofluorescence was negative. Further work-up with blood and urine tests showed a slight increase in C-reactive protein and no other abnormalities. Complementary examinations were negative for antinuclear antibodies, antineutrophil cytoplasmic antibodies and cryoglobulins, and serology for hepatotropic viruses and HIV was negative. A rapid diagnostic test for COVID was also performed, which was negative. On follow-up without treatment 5 days later, she presented postinflammatory pigmentation and no new lesions were seen.

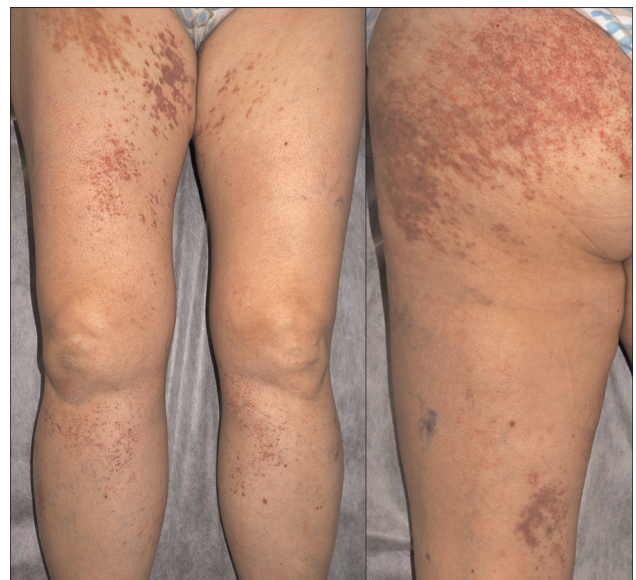


Figure 1 Physical examination showed palpable purpura lesions in the buttocks and in a splashed way in the legs.