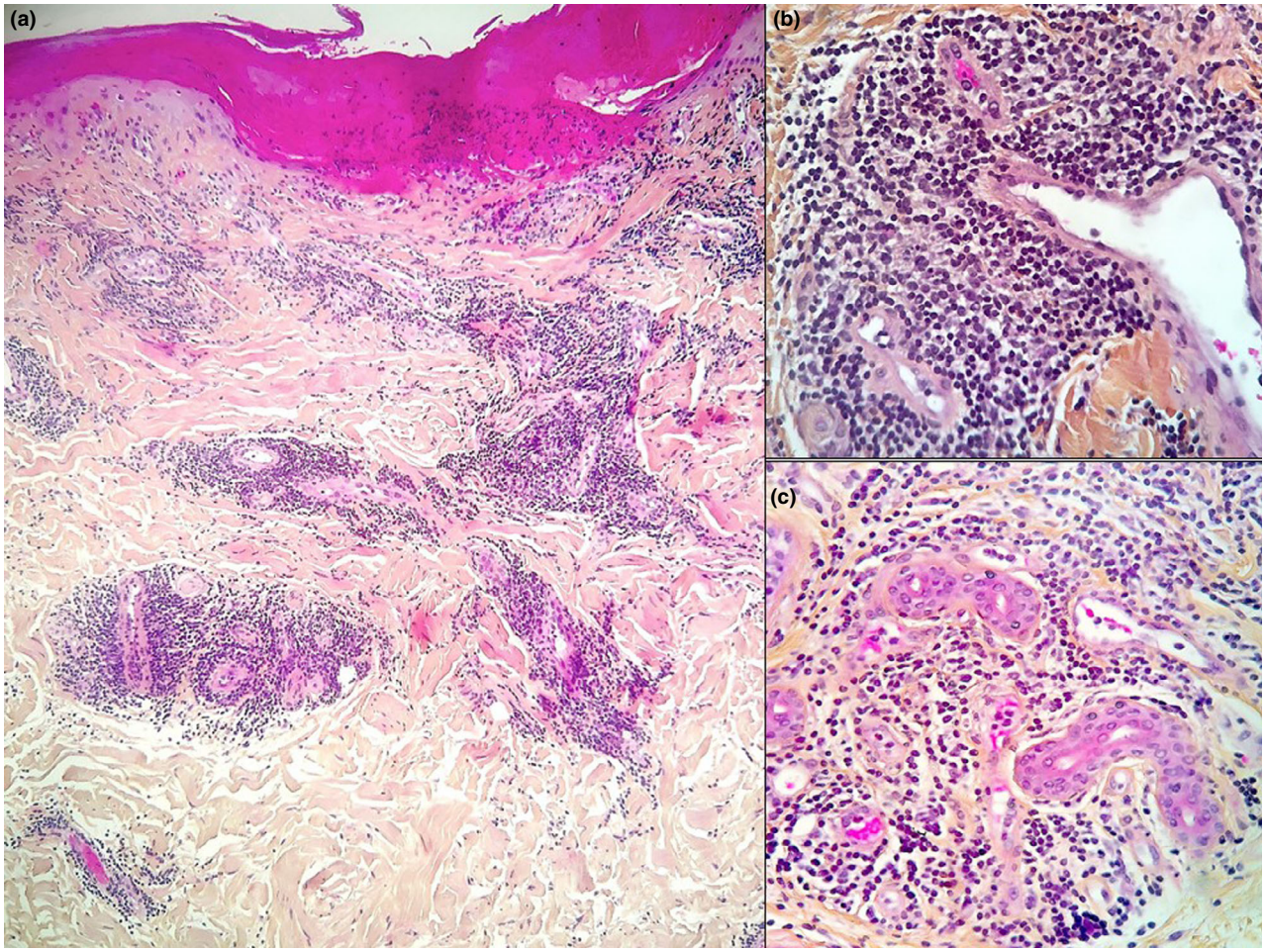

Figure 2 Microscopic examination of a skin biopsy of the lesion shown in Fig. 1 shows a partly necrotic epidermis and a dense dermal lymphocytic infiltrate (a) forming aggregates around blood vessels (b) and sweat glands (c) (haematoxylin–eosin–saffron stain, original magnifications: a, ×100; b, c, ×250).

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Psoriasis flare-up associated with second dose of Pfizer-BioNTech BNT16B2b2 COVID-19 mRNA vaccine

A 46-year-old Caucasian man presented with psoriasis flare-up, which occurred a day after second dose of COVID-19 Pfizer-

BioNTech BNT16B2b2 mRNA vaccine. The patient had been suffering from plaque psoriasis for 24 years. During the last 21 months, his psoriasis was completely clear (PASI 0 points) due to deucravacitinib treatment in the clinical trial. Before entering the clinical trial two years ago, the severity of his psoriasis was assessed as PASI 18 points. For the last 48 weeks, he has been in the open-label phase of above-mentioned trial receiving deucravacitinib 6 mg orally once daily. Regarding COVID-19 vaccination, the patient received his first dose of Pfizer-BioNTech BNT16B2b2 mRNA vaccine and experienced only pain at the site of vaccine injection lasting for 24 hours. Five days after the second dose (administered 3 weeks after the first shot), he noticed psoriatic lesions on his lower legs, which quickly spread with time extending to the whole lower extremities and trunk. He presented again with pain at the injection site accompanied with fewer up to 39°C and malaise lasting for 48 hours. On admission, one week after the disease exacerbation, physical examination revealed highly inflammatory, psoriatic plaques with gross, silver scaling localized mostly on patient's lower legs (Fig. 1a and b). Moreover, multiple, smaller lesions were visible on patient's back and chest (Fig. 1c). The patient did not complain of neither associated itch nor pain. The PASI score was 18.5 points.

Treatment of chronic inflammatory disorders changed drastically during COVID-19 pandemic. Problems with drugs availability and irregular consultations with dermatologist caused many patients to suffer from exacerbations.[1] Moreover, the pandemic triggered insecurity about the use of novel treatment modalities.[1] Yet, it is important to emphasize that psoriatic patients may present higher risk of respiratory diseases because of systemic inflammation.[2] Therefore, and due to the lack of data on safety of novel, mRNA COVID-19 vaccines, concern on its impact on patients suffering from inflammatory diseases has been raised. Vaccination, in general, is an uncommon factor triggering psoriasis flares; nevertheless, the association of vaccination with the new development or exacerbation of this skin disease has been reported.[3,4] The available reports include mostly cases of psoriasis flare-ups after vaccination for influenza (H1N1), pneumococcal pneumonia and yellow fever.[3–5] However, until now, there was no well-described association with

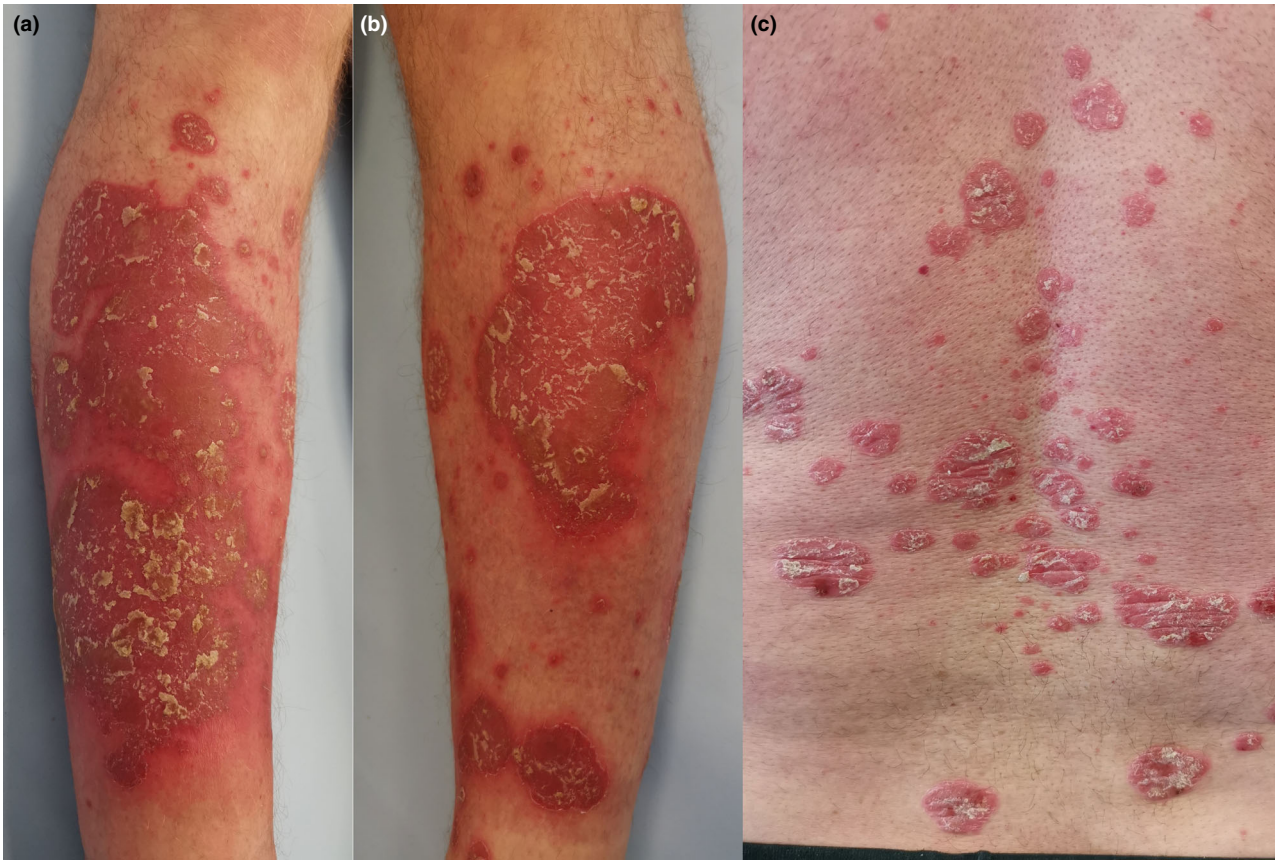

Figure 1 Highly inflammatory psoriatic lesions on patient's calf (a) and lower leg (b). Multiple psoriatic plaques on patient's back (c).

novel mRNA COVID-19 vaccines. Possible cutaneous reactions after COVID-19 vaccination were characterized recently in a registry-based study of 414 cases by McMahon et al.[6] Among others, authors described cases of local site reactions, swelling, erythema, urticaria, erythromelalgia and flares of existing dermatologic disorders. Regarding the prevalence of psoriasis flare-ups, amid 414 cutaneous reactions, authors stated that it occurred only in two patients, which seems to be very rare. Moreover, there was no explicit description of skin lesions, nor its association with particular vaccination.[6] Therefore, to the best of our knowledge, our case is the first, well-described example of psoriatic flare-up after COVID-19 Pfizer-BioNTech BNT16B2b2 mRNA vaccine. The mechanisms responsible for psoriasis exacerbation after vaccination are yet to be understood. It is possible that similarly to influenza vaccines, it may be caused by both dysregulation of immune system due to viral components and vaccine adjuvants.[3] Moreover, mRNA vaccines, like BCG or diphtheria, may cause a significant increase in IL-6 production and recruitment of Th17 cells, which play an important role in pathomechanism of psoriasis.[3] Nevertheless, even though psoriasis flares are rare, because of extensive and rapid vaccination, medical professionals should pay close attention to possible adverse effects and counteract the worsening of patient's clinical condition.

Conflicts of interest

No conflict of interest.

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The patients in this manuscript have given written informed consent to publication of their case details.

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Systemic drug-related intertriginous and flexural exanthema like eruption after CoronaVac vaccine

Editor,

Systemic contact dermatitis is a condition seen in individuals when sensitized to an allergen through skin then exposure to the sensitized substance or cross-reacting to it.[1] In 1984, 'Baboon syndrome' described as a systemic contact dermatitis characterized with involvement of flexural region and buttocks area which named after the red bottomed baboons.[2] Hausermann *et al*.[3] reported drug-related Baboon syndrome without a previous sensitization which named as symmetrical drug-related intertriginous and flexural exanthema (SDRIFE). We are presenting a case of SDRIFE-like eruption after COVID-19 vaccination.

An 87 year-old man presented to our clinic with itchy rashes which started from his arms then spread to his legs and genital area. The patient's history revealed that he had CoronoVac vaccine four days before the rashes. His medical history contains hypertension, coronary artery disease, chronic obstructive pulmonary disease and chronic kidney disease. The patient is using lercanidipine, theophylline, acetylsalicylic acid, tiotropium bromide and salmeterol for five years. Except his usual drugs, there was no use of new drugs or herbal products in his history. Dermatological examination revealed sharp boarded erythematosquamous plaques on the axillae, antecubital fossae, flexural areas of the forearms, inguinal folds and the anogenital area (Fig. 1). Laboratory tests were in normal range except elevated kidney levels. Skin biopsy showed epidermal parakeratosis, hyperkeratosis, acanthosis, spongiosis and mild lymphocyte exocytosis. Dermal changes include perivascular lymphohistiocytic infiltration and erythrocyte extravasation. With these clinical and histopathological findings, patient diagnosed with SDRIFE-like eruption. For treatment, we started topical corticosteroids, oral antihistamine and 40 mg prednisolone which we tapered over a 3-week period. Patient's lesions significantly recovered. The patient did not attend to his controls; therefore, we could not perform a patch test.

In December 2019, at Wuhan city of China, an unknown outbreak of severe lower respiratory disease was reported. SARS-CoV2 isolated from these patients as causative agent and the