

were within normal limits. Immunofluorescence for antinuclear antibody (ANA) showed a borderline fine speckled pattern, but serology for rheumatoid factor and ANA profile including anti-double-stranded DNA were negative. A punch biopsy was taken for light microscopy and direct immunofluorescence examination.

Histopathology revealed irregular rete pegs and basket-weave keratin with focal parakeratosis in the epidermis. The upper dermis showed degenerated collagen, fibrinous material and an inflammatory infiltrate composed of palisaded histiocytes along with lymphocytes, few eosinophils and plasma cells (Fig. 1b). Toluidine blue produced focal metachromatic staining indicating mucin deposition. Dermal findings were unremarkable. Staining with Ziehl-Neelsen and Fite Faraco did not yield any specific findings. Direct immunofluorescence was negative.

A final diagnosis of generalized GA, palisading histological type, was made. No treatment was started, but at follow-up 1 week later, all the lesions had dramatically resolved, including the ones on the unbiopsied site, suggestive of a remote reverse Koebner phenomenon (Fig. 1c).

GA is a granulomatous disorder postulated to be a delayed hypersensitivity reaction to dermal components.¹ The common clinical types include localized, generalized, perforating, patch and subcutaneous patterns. The generalized form accounts for approximately 15% of cases, and presents with multiple erythematous papules and plaques on the trunk and limbs.

The Koebner phenomenon, first described by Heinrich Koebner, refers to the development of isomorphic pathological lesions in uninvolved skin following trauma.² The disappearance of skin lesions post trauma is referred to as reverse Koebner phenomenon. The term 'remote reverse Koebner phenomenon' has been suggested as a description for resolution of lesions distant from the trauma site.

Tissue trauma, including biopsy, initiates an orderly process of wound healing leading to formation of granulation tissue, remodelling of the extracellular matrix, neovascularization and wound contraction, thereby causing resolution of the lesions.³ Most of the existing literature describes reverse Koebner reactions at the trauma site, such as resolution of lesions at a biopsy site only, with persistence of lesions on unbiopsied skin or the disappearance of lesions after biopsy with additional use of topical corticosteroids.^{3,4} One case report showed resolution of generalized GA 4 weeks after biopsy.⁴

Although GA is known to resolve spontaneously and can often be self-limiting, this case of generalized GA, palisading type, with extensive lesions of 10 months' duration resolving 1 week post biopsy without any treatment is an exceptional depiction of the poorly understood remote reverse Koebner phenomenon.

Gopikrishnan Anjaneyan,¹ Nandhetha Sreenivasan¹ and Malini Eapen²

Departments of ¹Dermatology and ²Department of Pathology, Amrita Institute of Medical Sciences and Research Centre, Amrita Vishwa Vidyapeetham, Kochi, Kerala, India
E-mail: drgopikrishmana@gmail.com

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Comment on: 'Pityriasis rubra pilaris-like eruption following mRNA COVID-19 vaccine'

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Linked article: Hunjan MK *et al.* *Clin Exp Dermatol* 2022; **47**: 188–90.

Dear Editor,

We read with interest the recent article by Hunjan *et al.*¹ in *Clinical and Experimental Dermatology* on the appearance of a pityriasis rubra pilaris (PRP)-like eruption following administration of the BNT163b2 (Pfizer-BioNTech) mRNA COVID-19 vaccine. We agree that the COVID-19 vaccine may cause some adverse effects, such as skin irritation. A rash resembling PRP may appear, but it is not clear that this is linked to vaccination. It is usually difficult to draw any conclusions about such links because most reported cases have no information about the patient's immunological system or dermatological health prior to vaccination. It is also possible for a vaccine recipient to have an undiagnosed medical condition at the same time.

In the paper, the authors concluded that 'To our knowledge, this is the first reported case of PRP following administration of the BNT163b2 COVID-19 vaccine'.¹ However, this is not in fact the first such report, as Magro *et al.* published a paper in late 2021 about a similar eruption in a patient who also received the BNT163b2 vaccine.²

Rujittika Mungmumpuntipantip¹ and Viroj Wiwanitkit²

¹Private Academic Consultant, Bangkok, Thailand and ²Department of Community Medicine, Dr DY Patil University, Pune, India
E-mail: rujittika@gmail.com

Conflict of interest: the authors declare that they have no conflicts of interest.

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Unexpected consequences of SARS-CoV-2 pandemic: scabies infestation

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Dear Editor,

The COVID-19 pandemic had a monumental impact on the practice of medicine, and 2020 saw a shift towards virtual consulting and changes in the range of conditions presenting to dermatology, from those directly COVID-related (e.g. chilblains, viral eruptions) to consequences of our work (e.g. personal protective equipment-related dermatosis, hand dermatitis, mask acne). We report an additional significant change in our practice during this pandemic, a rise in 'difficult-to-treat' scabies.

Scabies is a highly contagious skin infestation caused by the mite *Sarcoptes scabiei* var. *hominis*. In developed countries, scabies is usually observed sporadically or in the form of institutional outbreaks, such as in hospitals or group facilities or among displaced persons. It is commonly encountered in primary care, and a small fraction of cases present to dermatology. In the UK and Ireland, the usual treatment is two applications of topical permethrin 5% (or malathion 0.5% as second-line treatment) applied 1 week apart, with simultaneous treatment of close contacts. Correctly applied, this treatment is usually effective.^{1,2} Oral ivermectin is occasionally used off-licence in cases that have failed topical therapy or in case of crusted scabies.² However, we observed a significant increase in scabies requiring systemic ivermectin in our region from March 2020 to July 2021, compared with the average for the same period over the previous 4 years. This prompted a retrospective review of our patient records for oral ivermectin prescriptions in order to identify trends.

Our department operates an urgent primary care referral pathway, with access for general practitioners via telephone and email. This continued throughout the pandemic. Prior to March 2020, scabies requiring treatment with systemic ivermectin occurred on average once yearly

Table 1 Comparison of demographic, clinical and therapeutic data between scabies cases requiring systemic ivermectin therapy diagnosed during the months of 'confinement' and 'non-confinement'.

| | Confinement ^a | No confinement ^b |
|--|--------------------------|-----------------------------|
| Total cases, <i>n</i> | 10 | 7 |
| Rate per month | 0.63 | 0.09 |
| Rate per year | 7.50 | 1.09 |
| Age, years; mean (median) [range] | 33.7 (27) [0.3–80] | 23.3 (21) [9–53] |
| Complicated cases, <i>n</i> ^c | 3 | 0 |
| Mean symptom duration, months | 8.14 | 11.25 |
| Mean permethrin application, <i>n</i> | 5.75 | 6.40 |
| Cases with known clustered contacts, % | 83 | 100 |

^aConfinement: period March 2020 to July 2021 (16 months);

^bno confinement: period July 2016 to March 2020 (44 months);

^ctwo complicated cases were admitted: one had crusted scabies, the other required skin biopsy.

(mean annual incidence rate 1.09); however, this rose to an annual rate of 7.50 during the period of our review (Table 1). Both groups had used a similar number of permethrin applications prior to review (5.75 vs. 6.40), and none of the patients had received prior ivermectin therapy. Both groups had high numbers of reported symptomatic close contacts (83% vs. 100%). Interestingly, those seen during confinement had a shorter mean duration of symptoms (8.14 vs. 11.25 months) and were three times more likely to have complications (hospital admission, biopsies or crusted scabies).

The policy within our department is to repeat topical therapy with concomitant treatment of close contacts and advice on washing clothing/bedding, is usually successful and in line with best practice.^{1,2} We reserve systemic therapy for those who, despite this, have evidence of new burrows (i.e. not persistent itch). Confinement and COVID-19 has changed how and where people spend their time. More households are sharing spaces for long periods, and despite lifting of lockdown restrictions, many people continue to work from home. This probably increases the risk of transmitting the parasite through direct contact or by fomites, and similar observations have been reported from Spain.³ Scabies is also more commonly observed during the winter months.⁴ The shorter duration of symptoms may reflect the increased efficiency of our telephone referral advice, in response to reduced access to in-person appointments during the pandemic and is something to consider for the future.

This was a small retrospective study, and therefore makes generalizations difficult. Nevertheless, our centre has noticed significant changes in presentation of *Sarcoptes* to secondary care during the pandemic, with higher requirement for systemic ivermectin therapy, which must be balanced with the potential risks of this off-licence treatment.⁵