

**IMAGES IN EMERGENCY MEDICINE**

## Dermatology

# Woman with pruritic rash and dermatographism

Trent R. Malcolm MD, MESC<sup>1</sup>  | Yash B. Shah<sup>2</sup><sup>1</sup>Department of Emergency Medicine, Jefferson Washington Township Hospital, Jefferson Health New Jersey, Sewell, New Jersey, USA<sup>2</sup>Sidney Kimmel Medical College, Thomas Jefferson University, Philadelphia, Pennsylvania, USA**Correspondence**

Trent Malcolm, MD, Department of Emergency Medicine, Jefferson Washington Township Hospital, Jefferson Health New Jersey, Sewell, NJ, USA

Email: [trent.r.malcolm@gmail.com](mailto:trent.r.malcolm@gmail.com)

## 1 | CASE PRESENTATION

A healthy 34-year-old female presented with 1 day of diffuse urticaria and dermatographism unresponsive to loratadine and diphenhydramine. The patient reported no apparent allergic exposures and denied dyspnea, wheezing, emesis, or angioedema. Recent history was notable only for Moderna COVID-19 vaccine booster administered 10 days prior. Vital signs were normal. Examination revealed mild periorbital edema, dermatographism, and diffuse urticaria of extremities and trunk (Figure 1).

## 2 | DIAGNOSIS

### 2.1 | Chronic spontaneous urticaria following mRNA COVID-19 vaccination

The patient was prescribed diphenhydramine 50 mg every 6 hours and prednisone 40 mg daily. After allergist follow-up 3 days later, the patient was prescribed an extended steroid taper, cetirizine, famotidine, and diphenhydramine. At day 23 follow-up, the patient reported persistent symptoms on low-dose prednisone (5 mg daily) and antihistamines (Figure 2). At day 42 (Figure 3), the patient was diagnosed with chronic spontaneous urticaria and her allergist prescribed omalizumab.

Up to 10.5% of patients experience cutaneous adverse reactions following COVID-19 vaccination.<sup>1-3</sup> Cutaneous manifestations are variable in appearance and time to presentation and may include urticarial, morbilliform, and vasculitic eruptions, as well as delayed localized injection site reactions and chronic spontaneous urticaria.<sup>4-7</sup>



**FIGURE 1** Spontaneous urticaria and dermatographism of the trunk on the day of presentation

Chronic spontaneous urticaria is characterized by urticaria occurring on most days of the week over 6 weeks or longer.<sup>8</sup> Therapy includes second-generation antihistamines and avoidance of known triggers (eg, medications, stress). Refractory cases may require monoclonal antibodies and/or immunosuppressants.<sup>8</sup> As mRNA vaccination campaigns expand, clinicians should be prepared to recognize and treat cutaneous adverse reactions, including chronic urticaria and dermatographism.

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**FIGURE 2** Urticaria and dermatographism of the back following 23 days of optimized pharmacotherapy



**FIGURE 3** Pruritic dermatographism on day 42 of symptoms. At 6 weeks, the patient was diagnosed with chronic spontaneous urticaria and prescribed omalizumab

## ORCID

Trent R. Malcolm MD, MEdSc  <https://orcid.org/0000-0003-4327-4493>

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