Wound Sleuth

By R. Gary Sibbald, BSc, MD, MEd, FRCPC (Med) (Derm), FAAD, MAPWCA, JM and Patricia M. Coutts, RN, IIWCC

R. Gary Sibbald *works at the University of Toronto as a professor of public health and medicine and has an interprofessional wound and dermatology clinic in Mississauga.* ***Patricia M. Coutts*** *works as the clinical wound and research coordinating nurse at the Mississauga clinic.*

Treating Red, Sore, Itchy and Tender Hands and Feet

A 39-year-old female administrative assistant had hand and foot dermatitis that in the previous week had become worse with acute swelling and pain (Figure 1), necessitating an Emergency visit. She was diagnosed with cellulitis and placed on oral ciprofloxacin 500 mg bid and intravenous clindamycin. The patient had stated allergies to cephalosporin antibiotics.

The team in Emergency assessed a secondary infection based on serous exudate and local pain and treated this with intravenous antibiotics. A slow-release iodine dressing was ordered applied to the affected skin on the hands and covered with gauze, then wrapped with cling (Figure 2). This dressing protocol was followed by the home and community care nursing clinic. The patient reported experiencing considerable pain after the initial dressing application.

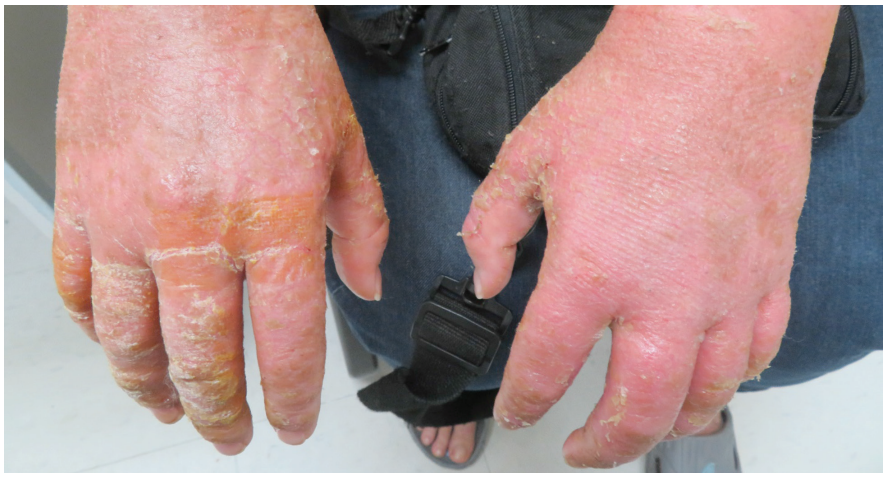

Figure 1

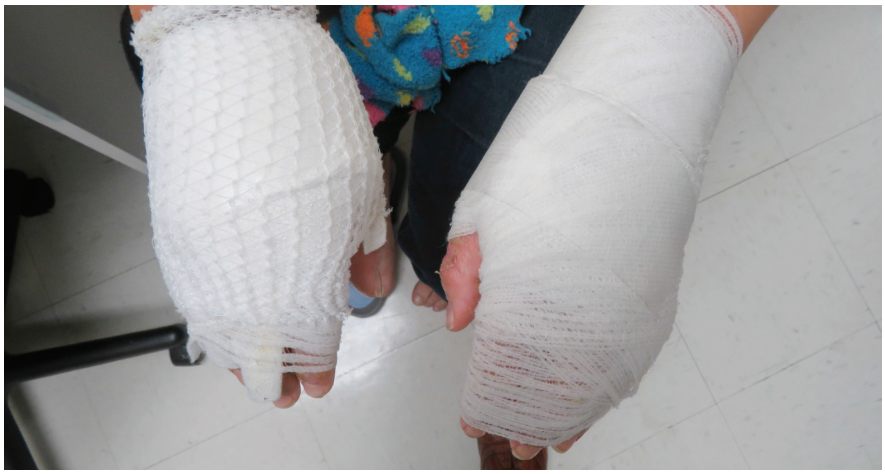

Figure 2

Q Do you agree with this treatment?

Things to Consider

The surface of the skin exhibited acute allergic dermatitis. Topical antibacterial creams with neomycin, polymyxin or gramicidin can all act as allergens. The stocking-and-glove distribution to the effect on the hands and feet could also represent a reaction to rubber gloves or protective wrap.

Changes to the Emergency Treatment Plan

When the patient arrived in our dermatology clinic for a scheduled appointment for another chronic condition, we knew we needed to address this acute reaction in a different way, so we discontinued the slow-release iodine dressing—which is actually pro-inflammatory and will aggravate acute dermatitis—and ordered a relatively high-potency topical steroid cream to apply bid and prn for the itch on the hands and feet: fluocinonide 0.05% cream—400 g—has approximately nine times the potency of 1% hydrocortisone cream. TIP: Keeping the cream in the refrigerator will give an additional anti-itch effect.

The patient weighed 60 kilograms, so she was started on oral prednisone at a dose of 0.5 mg per kilogram of body weight, with a rapid taper (60 x 0.5 = 30 mg, and taper by 5 mg every 5 days).

For itch, we combined cetirizine 20 mg qam (this is a prescription strength, with the over-the-counter strength being 10 mg) with hydroxyzine 25 to 75 mg at night. Also included was hydroxyzine syrup 2.5 to 10 mg prn for the itch, as the syrup can work very quickly, within 10 to 15 minutes.

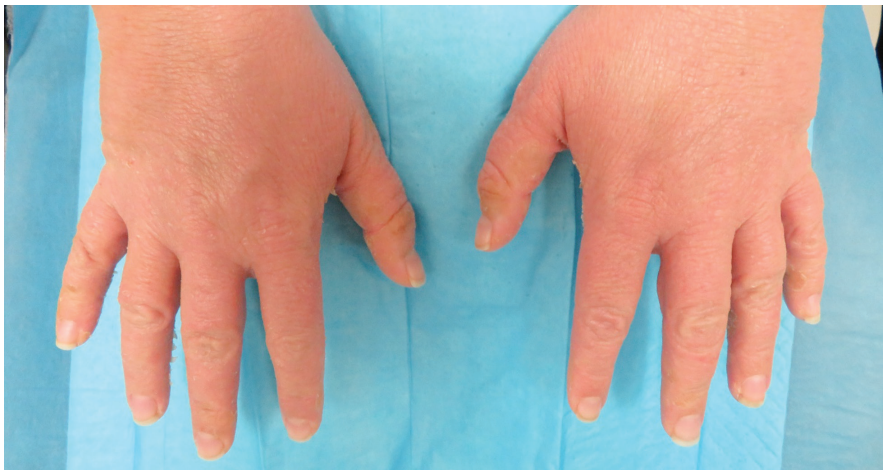

Figure 3

Outcome: 72 Hours Later

Three days later, the hand swelling and crusting were dramatically better, and the pain was signifcantly reduced (Figure 3). The itch had subsided, and the patient was able to wear cotton gloves over her topical corticosteroid cream. After two weeks of extreme discomfort, she could again function.

Q How would you test for the potential causative allergen?

A Apply various creams and ointments used for normal skin to the inner surface of the forearm. This is referred to as a Repeat Open Application Test (ROAT), as described below:

1. Draw a circle the size of a loonie on the inner forearm just below the elbow crease for each cream or ointment that you are going to test. TIP: Mark the circle with an identifier to correspond to the product being tested, if doing more than one product at a time.
2. Apply the cream or ointment two times per day for up to four days or until the skin becomes red (this is a delayed hypersensitivity test, like a TB skin test). This will confirm a positive allergic response to one of the components of the tested product.
3. A dermatologist or allergist may confirm the diagnosis by following this up with more formalized patch tests to common contact allergens.

Key Lesson

Most inflammatory skin lesions that are not ulcers do not respond well to wound dressings, especially if the substance applied is pro-inflammatory.