

hypersensitivity skin reaction, including the rare IGD exemplified by our case.

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Successful Rapid Desensitization for Allergic Dermatitis to Cattle

To the Editor:

A novel rapid desensitization protocol using commercial epithelial allergen extract is described for successful treatment of severe contact dermatitis because of cattle dander.

A 49-year-old woman with seasonal rhinitis and no significant prior cutaneous or other disorders presented after new onset 1 year ago of progressively worsening facial redness, swelling, and pruritus. These symptoms developed rapidly 1 hour after arrival to show cattle with her son at livestock shows. Initially, she had partial benefit from topical emollients but eventually required systemic steroid injections from her primary physician. By initial presentation, in the winter, she no longer perceived improvement even from systemic corticosteroids and required up to a full week away from cattle shows for partial resolution of the facial rash. She denied associated airway symptoms, including any similar to her presently inactive vernal

rhinitis, or involvement of skin elsewhere. Baseline Skindex-30 was 95. On examination, she had uniform minimally raised erythema of the entire face. A patient-produced photo during a flare showed additionally lichenification of the eyelids. She had no conjunctival injection or nasal mucosal inflammation. Epicutaneous prick-puncture testing was performed using an available cattle hair extract as well as routine aeroallergens (Hollister-Stier, Spokane, Wash). Cattle hair produced a 7-mm wheal, compared with a 5-mm histamine control. All others were negative except bahia (4 mm) and northern mix (2 mm) grasses.

Patch testing was also originally planned, but the positive prick test to cattle hair was felt to confirm the clinical diagnosis of contact dermatitis due to cattle hair. As with previously described cases, she had features of both immediate and delayed cutaneous hypersensitivity to cattle epithelium.^{1,2} Grass pollen matched the vernal timing of her allergic rhinitis but not the cutaneous symptoms. Given refractoriness to topical and systemic therapies, as well as disability when around cattle, a trial of desensitization to cattle epithelium was offered. Immunotherapy is well established for allergic airway disorders, but only limited evidence for allergic dermatitis is available for dust mites.³ Grass extract was added for a secondary goal of treating her grass pollinosis.

She underwent a 1-day rapid desensitization, achieving 17% of the target dose (Table 1). Over the course of 9 subsequent

TABLE 1. Rapid Desensitization Schedule

Dilution	Dose, mL	Interval
1:1000	0.03	Day 1 (every 30 min)
	0.3	
1:100	0.1	
	0.3	
1:10	0.1	
	0.2	
	0.08	Week 1
	0.13	Week 2
	0.2	Week 3
	0.3	Week 4
	0.45	Week 5
	0.6	Week 6
Undiluted*	0.08	Week 7
	0.13	Week 8
	0.2†	Week 9, 11, 14, 18 (upon which monthly)

*Undiluted mix consists of (by percent volume of manufacturer's undiluted bulk) 70% acetone-precipitated cattle hair, 20% northern grass mix (Timothy, orchard, redtop, Kentucky blue), 10% bahia grass, and no diluent.

†Maintenance dose thus contains (in the volume of manufacturer's undiluted bulk) 0.14 mL of acetone-precipitated cattle hair, 4000 AU of northern grass mix, and 0.02 mL of bahia grass.

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The authors have no funding or conflicts of interest to declare.

DOI: 10.1097/DER.0000000000000082

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weekly dose increases, she was able to return to cattle shows several days per week due to rapid clearance of her facial rash. She required no further medications while on injections. Her only breakthrough symptom was during a scheduled intensive cleaning of cattle pens, which caused some trivial eyelid pruritus lasting an hour. Upon reaching the full dose, her Skindex-30 regressed to 32. She had no anaphylactic reactions to any injections and is now receiving the maintenance dose monthly, with a goal of 3 to 5 years' total to attain long-lasting remission, per routine guidelines for aeroallergen immunotherapy.⁴

This case illustrates, to my knowledge, the first successful treatment of allergic contact dermatitis using rapid desensitization to a commercial epithelial cattle hair extract. Immunotherapy potentially offers a specific, highly efficacious treatment for this frequently severe, debilitating disorder.

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Posttraumatic Eczema: A Manifestation of the Atopic Diathesis?

To the Editor:

Posttraumatic eczema has been categorized as either an isomorphic response to trauma in patients with endogenous eczema or idiopathic in cases without atopic dermatitis.^{1,2} We report a case of idiopathic posttraumatic eczema in a patient

with asthma and allergic rhinitis but no history of atopic dermatitis, and we speculate that the barrier disruption caused by trauma provided the “second hit” needed for an eczema phenotype in this atopy-prone individual.

A 25-year-old woman was referred for a 3-year history of recurring pruritic rashes after venipuncture performed for laboratory monitoring, attributed to a metal allergy from the hypodermic needle. She denied applying any topical preparations and had no reactions to alcohol, adhesives, or costume jewelry. Her only medical history was hypothyroidism controlled by levothyroxine. Patch testing with an expanded North American Contact Dermatitis Research Group Screening Series and a Metals Series (Chemotechnique) was negative at 2 and 4 days, suggesting that a metal allergy was not the inciting factor.

A glass slide was used to lightly scratch her volar forearm (Fig. 1A–C). Similar to prior reactions after venipuncture (which had not been performed within the preceding month), she developed pink papules and pruritus around the scratches after 48 hours. The eruption worsened until day 6 and then resolved over the following week. Scratches in the popliteal fossa also

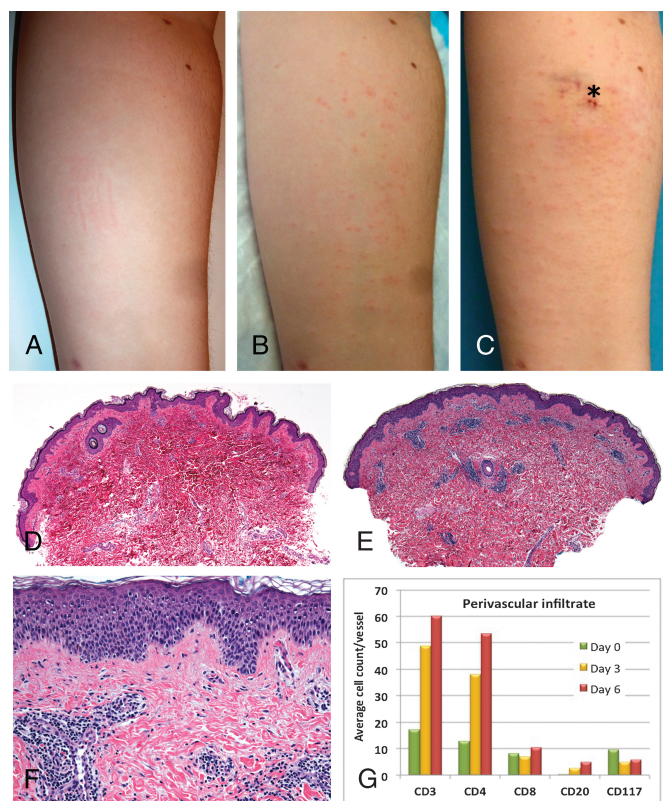


FIGURE 1. A, Day 0, 3 parallel scratches on the ventral forearm. B, Day 3, papular eczematous eruption. C, Day 6, worsened eruption with biopsy sites visible on the proximal forearm (asterisk). D, Day 0, biopsy of normal skin of ventral forearm. E, Day 6, perivascular infiltrate. F, Day 6, higher power view. G, Characterization of the perivascular infiltrate using cell counts of immunohistochemical stains.

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The authors have no funding or conflicts of interest to declare.

This work was presented at the 2014 American Contact Dermatitis Society meeting in Denver, CO.

DOI: 10.1097/DER.0000000000000088

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