

Localized Dermographism Presenting As Allergic Contact Dermatitis from Spectacle Frames

Kalman L. Watsky

Précis

A 43-year-old woman was extensively evaluated for contact allergy due to eyeglass frames, without resolution of symptoms that proved to be an atypical presentation of dermographism.

Discussion

A common complaint, dermographism affects approximately 5% of the normal population. Symptomatic dermographism is the most common form of physical urticaria and has an unpredictable course that may last from 5 to 7 years.¹ Localized dermographism is a rare variant that has been observed on the hands and genitalia; as a result, it has been reported as a mimic of latex glove or condom allergy, both immediate and delayed.² To my best knowledge, there have been no reports of dermographism as a mimic of another facial dermatosis.

A 43-year-old woman presented for further evaluation of a pruritic eruption on the bridge of her nose and superior sulci of her ears that for the preceding year recurred whenever she wore any of several plastic-framed eyeglasses. She required systemic corticosteroid treatment on one occasion for associated eyelid and facial swelling. The patient described the reaction as sensations of “burning” and pruritus along with redness at sites of contact with the eyeglass frames; it would worsen over days because of rubbing and would resolve with oral antihistamines. She had a past history of seasonal allergic rhinitis and of conjunctival inflammation following the use of some contact lenses, which had prompted the switch to eyeglasses. She also had a history of

periungual dermatitis related to the use of artificial fingernails. There was no personal or family history of atopic dermatitis. Her past medical history was otherwise unremarkable.

She had seen numerous specialists and undergone an extensive evaluation including skin-prick testing and expanded patch testing by a contact dermatitis expert. Positive reactions to nickel, cobalt, balsam of Peru, and ethyl cyanoacrylate were noted, but these allergens could not be confirmed as relevant to her presenting complaint. Because of recurring reactions on her nose and ears, even while wearing titanium-frame eyeglasses, she sought an additional opinion.

Further history at consultation revealed that the symptoms of burning and erythema usually developed within minutes of her putting on any eyeglasses. Our patient did not experience any symptoms when simply handling her eyeglass frames. She demonstrated marked dermographism (Fig 1) but denied having pruritus or “rash” at sites of friction from clothing. Long-term antihistamine therapy was started, initially with oral hydroxyzine (up to 125 mg qd), without improvement. Oral doxepin (initially 25 mg and titrated up to 75 mg qd) led to the relief of symptoms. Eighteen months later while on a lower maintenance dose of oral doxepin (25 mg/d), she was able to wear all of her favorite eyeglasses without a recurrence of the facial eruption (Fig 2).

Dermographism is a common condition that may coexist with eczematous dermatoses but may also mimic them.²⁻⁴ A history of an onset of symptoms within minutes of exposure should raise the possibility of



Figure 1. Marked dermographism.

From the Department of Dermatology, Yale University School of Medicine, New Haven, CT, and the Hospital of Saint Raphael, New Haven, CT.

Presented at the twentieth Annual Meeting of the American Contact Dermatitis Society, held in March 2009 in San Francisco, CA.

Reprints not available.

DOI 10.2310/6620.2010.10007

© 2010 American Contact Dermatitis Society. All Rights Reserved.



Figure 2. The patient after adequate antihistamine therapy.

immunoglobulin E-mediated immediate contact reactions, such as contact urticaria (either immunologic or nonimmunologic) or one of the physical urticarias. Our patient experienced immediate symptoms with both titanium and plastic eyeglass frames, did not react to either plastic shavings from the frames or a sample of titanium, and demonstrated dermographism with skin stroking. Although numerous allergens have been associated with spectacle frames,⁵ her positive patch-test results could not be confirmed as relevant and ultimately misled her initial physicians and perhaps kept them from treating her dermographism more aggressively. This case illustrates the importance of listening carefully to the patient's

history (here, especially in regard to the time course of symptoms). Additionally, patients with symptomatic dermographism may be extremely pruritic, which can lead to secondary skin changes. Once the patient began taking antihistamines in adequate doses to control her dermographism, her condition was controlled without the use of any other medications. Our patient was able to resume wearing glasses that had previously caused symptoms, thus confirming dermographism as the primary diagnosis.

Zebra

Dermographism can alter the clinical presentation of contact reactions and complicate therapeutic strategies when it mimics facial contact dermatitis.

References

1. Grattan CEH, Black AK. Urticaria and angioedema. In: Bologna JL, Jorizzo JL, Rapini RP, et al, editors. *Dermatology*. Philadelphia (PA): Mosby; 2003. p. 293.
2. Thomson KF, Wilkinson SM. Localized dermographism: a differential diagnosis of latex glove allergy. *Contact Dermatitis* 1999;41: 103–4.
3. Watsky KL, McGovern T. Intolerance to topical products may be due to dermographism. *Am J Contact Dermat* 2003;14:35–6.
4. Armstrong DKB, Smith HR, Rycroft RJG. Glove-related hand urticaria in the absence of type I latex allergy. *Contact Dermatitis* 1999;41:42.
5. Walsh G, Wilkinson SM. Materials and allergens within spectacle frames: a review. *Contact Dermatitis* 2006;55:130–9.