Allergic Contact Dermatoblepharitis

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CC: Itchy eyes and blurry vision OU

HPI: A 55 year-old woman with a past medical history significant for multiple sclerosis presented to our Comprehensive Ophthalmology clinic with a one-week history of itchy eyes and blurry vision. She had started using a new facial cleanser about two days prior to the onset of these symptoms. She had discontinued it one day before presentation and had not yet noticed any improvement.

Past Ocular History: Optic neuritis due to Multiple Sclerosis diagnosed in 2002, LASIK OU, dry eyes OU, amblyopia OS

Past Medical History: Multiple Sclerosis, hyperlipidemia, HTN, low back pain, GERD, hyothyroidism.

Medications: Refresh AT, simvastatin, hydroxyzine, baclofen, amantidine, omeprazole, levothyroxine

Allergies: NKDA

Family History: No family history of eye disease.

Social History: Denies tobacco or alcohol use.

Review of Systems: Negative except for what is described in HPI.

Physical Exam:

General: Normal body habitus, in no acute distress

Visual Acuity: OD 20/20-1 OS: 20/50

Pupils: OD: 4mm to 2mm, OS: 4mm to 2mm. No RAPD

Intraocular pressure: OD: 12 mm Hg, OS: 13 mm Hg

Anterior Segment exam: No preauricular lymphadenopathy

Lids and Lashes: Erythematous, thickened and scaly skin OU (Figure 1)

Conjunctiva: Minimal erythema, few papillae

Cornea: LASIK flap OU, diffuse punctate epithelial erosions OU, confluent centrally. Tear film break-up time < 10 sec OU

Anterior Chamber: No cell or flare OU

Iris: Normal architecture OU

Lens: Trace nuclear sclerosis OU.

Anterior Vitreous: Quiet OU

Dilated Fundus Exam:

Optic Nerve: Pink, sharp borders OU
Macula, vasculature and periphery normal OU

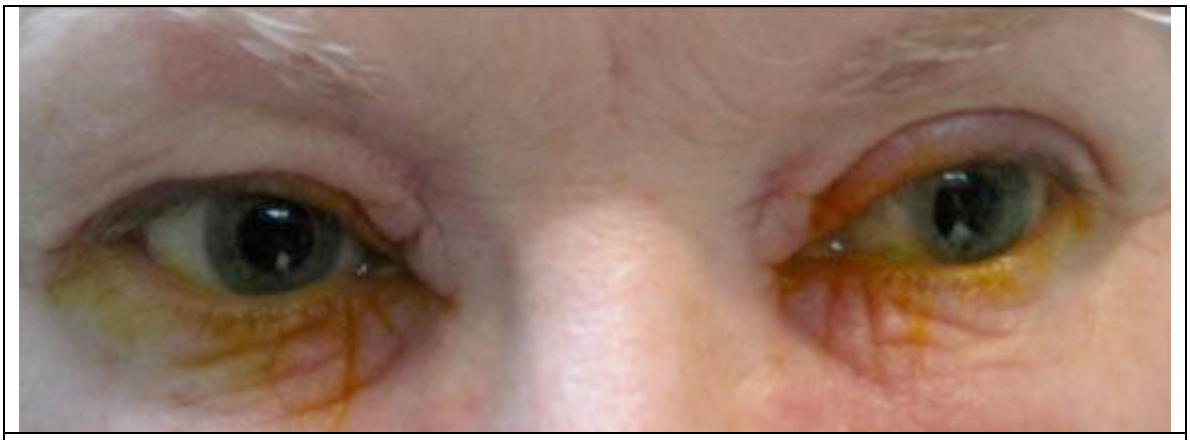

Figure 1: Note the erythematous, scaly, thickened eyelid skin OU.

In this patient, there is a clear history of new-onset of itchy eyes that accompanied the introduction of a new cosmetic product which is suggestive of allergic disease, or allergic contact dermatoblepharitis. Seborrheic dermatitis is a possibility given the patient's scaly lesions; however, it is often a chronic and recurrent disease and the skin is often greasy. Contact urticaria is also in the differential, however it presents within 30 minutes to an hour after exposure. Atopic dermatitis is also in the differential, but this tends to present in individuals who have a personal history of asthma, allergic rhinitis, or eczema, and this patient had none of these. Skin lesions for rosacea and psoriasis are different in appearance from the lesions in this patient. (2)

Course: The patient had already stopped the use of her new facial cleanser, and was instructed not to use it again. She was prescribed artifical tears and hydrocortisone 1% cream bid for a few days. Upon follow-up by telephone, the patient stated that her symptoms had completely resolved.

Discussion

Allergic contact dermatoblepharitis is the result of an allergic response to an ophthalmic medication, cosmetics, or environmental substances. It is most commonly a delayed type IV hypersensitivity reaction that presents 24 to 72 hours after exposure, after sensitization of T-lymphocytes to an antigenic substance.(1,2)

Medications commonly associated with allergic contact dermatoblepharitis include cycloplegics (atropine, homatropine), aminoglycosides (neomycin, gentamicin, tobramycin), antiviral agents (trifluridine, idoxuridine), and preservatives (thimerosal and EDTA). There are over 300 documented triggers, and common ones are summarized in table 1. These include cosmetics (products used for the eyelids, hands, face, and hair), metals (nickel, cobalt, gold), and fingernail products (base coats lacquer, and sealer). (1,3,4).

One of the hallmarks of the clinical presentation is pruritus of the eyelids. The eyelid develops an acute eczema with erythema, leathery thickening, and scaling of the eyelid. (See figure 1) There may be involvement of the conjunctiva, and punctate epithelial

erosions may be noted on the cornea.(1,2) Management of allergic contact dermatoblepharitis begins with removal of the offending agent. Identification of the agent can often be determined from the history, but occasionally a challenge of the agent is required. This should never be done with a person known to have a systemic allergy to a drug. In cases where an offending agent is not easily identified, patch testing can be helpful. In cases where suspected products are not known to ordinarily create skin irritation, a "use test" may be applied. To conduct this test, an implicated item is applied as is, twice a day to a 1cm x 1 cm site on the flexor forearm, back of the ear, or neck for five days. This site is then inspected for dermatitis.(5)

Supportive treatment with cold compresses and artificial lubricants is adequate in most cases. Adjunctive therapy may involve the use of cold compresses, topical antihistamines (such as azelastine for instantaneous relief of itching), mast-cell stabilizers, or topical nonsteroidal anti-inflammatory agents (in the case of pain). In severe cases, a brief (several day) course of hydrocortisone 1% may speed resolution. Topical corticosteroids should be used sparingly to avoid thinning of the eyelid skin.(1,2). Another option is topical immunomodulators, such as pinecrotimus cream (Elidel®) applied to the lid twice a day.(6)

TABLE 1: Sources of allergic contact dermatoblepharitis(3)

- Hand transfer of allergens
- Cosmetics: eyelids, face, hair, hands
- Topical medications
- Makeup brushes and applicators
- Objects in contact with the eyelids: eyelash curler, camera eyepiece, goggles, glasses, etc.
- Airborne contact dermatitis
- Soaps and shampoos
- Protein contact dermatitis: dust mites, latex, cornstarch, animal dander, fish, etc.
- Metal nail files
- Gloves and glove powder
- Eye medications and treatments
- Dermatitis secondary to blepharitis and conjunctivitis
- Plants
- Sunscreens
- Makeup removers
- Artificial nails and nail lacquer
- Systemic contact dermatitis
- Textiles

Epidemiology	Signs
• Type IV hypersensitivity reaction • Present 24-72 hours after exposure • Female predominance	• Erythema • Edema • Leathery thickening of skin • Scaling of eyelid
Symptoms	**Treatment**
• Pruritus • Unilateral or bilateral involvement • Occasionally painful	• Stop offending agent • Most cases only require cold compress and artificial tears • Adjuncts include topical antihistamine, mast-cell stabilizers and topical NSAID (if having pain) • For severe cases may use Hydrocortisone 1% (sparingly – 2-3 days bid) • May perform patch testing to identify offending agent

Sources:

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