

Seborrheic dermatitis of the eyelid

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Abstract

Seborrheic (say: seb-uh-ree-uh) dermatitis is a chronic inflammatory skin condition presenting as dry whitish scales or greasy scales. Can involve the scalp, eyebrows, forehead, face, trunk, or skin folds. Dandruff and cradle cap are both forms of seborrheic dermatitis. The severity of seborrheic dermatitis can be lessened by controlling the risk factors and by paying careful attention to skin care. Seborrheic dermatitis of the eyelid margin usually responds to gentle cleaning of the lid margins nightly as needed, with undiluted Johnson and Johnson baby shampoo using a cotton swab. Remove thick scales by applying warm olive or mineral oil and then wash off several hours later with Dawn washing detergent and a soft bristle tooth-brush. For dense scalp scaling, 10% Liquor Carbonic Detergents (LCD) in nivea oil may be used at bedtime, covering the head with a shower cap. This should be done nightly for 1-3 weeks. Once controlled, washing with zinc soaps or selenium lotion with periodic use of steroid cream will help maintain remission. Recently, creams classified as topical immune modulators are being used which suppresses the immune system to treat inflammation. Further, it is thought that sunlight improves seborrheic dermatitis. In some persons, the condition gets better in the summer, especially after outdoor activities.

Key words: Seborrheic, Dandruff, immune modulators, chronic inflammation, Liquor Carbonic Detergents

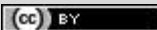
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Introduction

Seborrheic (say: seb-uh-ree-uh) dermatitis is a chronic inflammatory skin condition presenting as dry whitish scales or greasy scales. Can involve the scalp, eyebrows, forehead, face, trunk, or skin folds. Dandruff and cradle cap are both forms of seborrheic dermatitis. The severity of seborrheic dermatitis can be lessened by controlling the risk factors and by paying careful attention to skin care [1].

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with Dawn washing detergent and a soft bristle tooth-brush. For dense scalp scaling, 10% Liquor Carbonic Detergents (LCD) in nivea oil may be used at bedtime, covering the head with a shower cap. This should be done nightly for 1-3 weeks [2].

Once controlled, washing with zinc soaps or selenium lotion with periodic use of steroid cream will help maintain remission. Recently, creams classified as topical immune modulators are being used which suppresses the immune system to treat inflammation. Further, it is thought that sunlight improves seborrheic dermatitis. In some persons, the condition gets better in the summer, especially after outdoor activities.

Epidemiology

Eyelid dermatitis is usually seen in adults and teens and is less common in children, unless associated with atopic dermatitis (AD). The exact prevalence of eyelid dermatitis in the general population is unknown, but it is commonly encountered in clinical practice. Both men and women can manifest eyelid dermatitis, but women greatly outnumber men in most patch test studies of patients presenting with eyelid dermatitis [3].

Allergic contact dermatitis (ACD) is the most common type of eyelid dermatitis, accounting for approximately 50 percent of cases, followed by irritant contact dermatitis (ICD) and atopic eyelid dermatitis [4]:

A 10-year retrospective review from a single institution of 105 patch test patients with eyelid dermatitis found that 43.8 percent of patients had ACD, 38 percent had seborrheic dermatitis, and 7.6 percent had ICD [5].

A study of 362 females with eyelid dermatitis found that 50.1 percent had ACD, 20.9 percent had ICD, 13.5 percent had AD, 6.5 percent had an unspecified dermatitis, 6.3 percent had seborrheic dermatitis, and 2.9 percent were diagnosed with psoriasis [6]. Involvement of all four lids was strongly associated with ACD.

A study of 609 patients with periorbital dermatitis who underwent patch testing found that 52 percent had underlying ACD with common allergens, including nickel, benzoyl peroxide, fragrances, and antimicrobials [7]. Allergic eyelid dermatitis patients had an increased rate of allergies to topical antimicrobials and antibiotics, which may reflect exposure to topical eye medicaments [8].

Management

The management of eyelid dermatitis involves ongoing avoidance of exposure to irritants and allergens for patients with contact dermatitis and the use of topical anti-inflammatory agents, including topical corticosteroids and topical calcineurin inhibitors. There are no randomized trials assessing the efficacy and safety of these agents for eyelid eczema, and their use is based on limited evidence from small observational studies, indirect evidence based on their use in other types of eczema, and clinical experience [9].

Skin care

Conservative initial management of eyelid dermatitis includes gentle skin care and avoidance of fragrance and other known irritants in personal care, hair, and facial skin care products. Bland, fragrance-free emollients, such as petrolatum, may be applied directly to the eyelids [6].

Avoidance of irritants and allergens

For patients with a confirmed diagnosis of irritant or allergic contact eyelid dermatitis, ongoing avoidance of irritants and allergens is the mainstay of treatment. Petrolatum or other ointment-based emollients that are free of fragrance and other common allergens may be used. The use of perfume and aerosol hair sprays should be avoided [11].

Topical corticosteroids

We suggest topical corticosteroids rather than topical calcineurin inhibitors as the first-line therapy for eyelid dermatitis. As the eyelids exhibit the highest percutaneous absorption on the body (and in the setting of active dermatitis, where the skin barrier is broken, the absorption may be even higher), only low-potency topical corticosteroids are safe for short-term use on the eyelids. We typically use low-potency topical corticosteroids twice daily for up to two to four weeks. If needed, treatment with topical corticosteroids can be repeated after a "steroid holiday" of one to two weeks before application is resumed [3].

However, patients requiring continued treatment for more than four weeks should be switched to a topical calcineurin inhibitor.

In a small comparative study, 20 patients with moderate eyelid eczema and atopic keratoconjunctivitis were treated for three weeks with tacrolimus 0.1% ointment or clobetasone butyrate (a mid-potency topical corticosteroid) [6]. Both treatments were equally effective in reducing eyelid eczema and blepharitis signs and symptoms. No increase in the mean intraocular pressure (defined as an increase ≥ 2 mmHg) was noted in either group. However, one patient in the clobetasone butyrate group and one in the tacrolimus group developed an increase in the intraocular pressure of 5 mmHg that normalized in both cases after washout.

Prolonged use of topical corticosteroids in the periorbital area may induce a number of adverse effects. Even with low-potency topical corticosteroids, the eyelids remain vulnerable to thinning and atrophy. Long-term use of topical steroids on the eyelids can also lead to the development of a periorbital dermatitis, a rosacea-like eruption [10].

Ocular complications may rarely occur with inappropriate use of topical corticosteroids in the periocular area [5]. Glaucoma has been reported from periorbital use of topical corticosteroids in case reports and small case series [11]; however, in those cases, the corticosteroid strength was higher than what would be typically recommended for use on the eyelids and/or the topical corticosteroid was used for a prolonged period. In a retrospective review of 88 patients with atopic dermatitis (AD), 37 patients had used topical corticosteroids (groups 3 and 4) on the

eyelids and periorbital region, with an average frequency of 3.9 days per week and 6.4 months per year for 4.8 years. One patient had transient intraocular hypertension without glaucomatous changes, and two patients developed corticosteroid-induced cataract [1].

Topical calcineurin inhibitors

Topical calcineurin inhibitors (tacrolimus and pimecrolimus) can be used as an alternative to topical corticosteroids for the treatment of eyelid dermatitis in patients who require prolonged treatment (beyond four weeks). Topical calcineurin inhibitors are applied twice daily for two to four weeks or until improvement is noted, and then tapered. Treatment can be resumed if flares occur. The use of topical calcineurin inhibitors can initially be limited by a burning sensation when applied to inflamed skin, which improves with ongoing use [12].

The use of calcineurin inhibitors for eyelid dermatitis is supported by a few observational studies:

In one study, 20 adult patients with moderate to severe AD of the eyelids and no pre-existing glaucoma, cataract, or elevated intraocular pressure were treated with tacrolimus 0.1% ointment twice daily for eight weeks and followed for two additional weeks after the last day of treatment [13]. Of the 16 patients who completed the treatment, 12 patients were clear or showed excellent improvement based on the physician global assessment score. None of the patients developed cataract, glaucoma, or increased intraocular pressure during the course of the study.

In another study, 20 adult patients with long-standing allergic contact eyelid dermatitis were treated with tacrolimus 0.1% ointment twice daily for 15 days, followed by once-daily application for an additional 15 days [14]. Patients were then allowed to use topical tacrolimus once daily as needed for one month. Improvement from baseline was observed for multiple dermatitis parameters (erythema, edema, scaling, lichenification, itching, and burning). Treatment was well tolerated. Transient skin burning and itching was the only adverse effect reported by 12 of 20 patients.

In a small comparative study, 20 patients with moderate eyelid eczema and atopic keratoconjunctivitis were treated for three weeks with tacrolimus 0.1% ointment or clobetasone butyrate (a mid-potency topical corticosteroid) [15]. Both treatments were equally effective in reducing eyelid eczema and blepharitis signs and symptoms.

Cases Report

This is a retrospective study of 209 patients who presented with persistent or recurrent eyelid dermatitis with or without dermatitis elsewhere. Almost all underwent patch testing and, when indicated, radioallergosorbent test, skin prick and intradermal tests, and in many cases, usage tests as part of the workup. Relevant allergic contact dermatitis was found in 153 of 209 patients (74. %): 46 (23.%) had protein contact dermatitis, but only 7% had protein contact dermatitis without concurrent allergic contact dermatitis. Less than 1% had irritant dermatitis alone.

Twenty-three patients had atopic eczema, of whom 16 also had allergic contact dermatitis, protein contact dermatitis, or both. Other conditions included seborrheic dermatitis (n = 11), psoriasis (n = 7), dry eyes (n = 9), and dermatomyositis or overlapping connective tissue disease (n = 7). Important sources of contact sensitivity include cosmetics, metals, topical medications including corticosteroids, eye medications, dust mites, animal dander, and artificial nails; only 5 cases were caused by nail lacquer. Eyelid dermatitis is a multifaceted clinical problem, but in this group of patients, allergic contact dermatitis was a common cause, even among those with atopic eczema.

Conclusions

Allergic eyelid dermatitis is commonly related to eye drops and topical cosmetics or skin care products. Identification and elimination of causative agents is the mainstay of management. Topical corticosteroids often facilitate resolution of the associated inflammation. Therapy resistant patients may benefit from formal allergy testing.

Competing interests

The authors declare that they have no competing interests.

Ethics Statement

The study was approved by the ethics committees at the Department of Cell Biology and Biochemistry, Tech University Health Sciences Center, Texas, USA

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