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CASE REPORT

Bilateral eyelid erythema associated with false eyelash glue

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Abstract

We report an unusual case of bilateral eyelid erythema caused by eyelash glue. A 22-year-old woman presented with a 3-day history of bilateral eyelid dermatitis after attaching false eyelashes by using latex-containing glue. Slit-lamp examination revealed erythema and swelling of the upper lids of both eyes. The skin prick test was positive for eyelash glue and her total tear IgE score was high. To the best of our knowledge, this is the first report of bilateral eyelid dermatitis caused by eyelash glue.

Keywords: Eyelid dermatitis, false eyelash glue, latex

False eyelashes are very popular these days. Although this is not necessarily problematic, incorrect application of false eyelashes may cause ocular damage. We report a patient with bilateral allergic eyelid dermatitis caused by false eyelash glue.

Case report

A 22-year-old woman developed severe bilateral eyelid swelling only 2 h after gluing false eyelashes to her eyelids. She had no allergic episodes including atopic dermatitis, contact dermatitis, or latex allergy. She also had no dry eye or dry skin. She presented to our hospital 3 days after the onset of eyelid swelling. The eyelash glue contained latex rubber, water, and butylene glycol. On examination, the patient's vision was 20/20 in both eyes. Severe erythema and swelling of the upper eyelid was noted bilaterally (Figure 1A and 1B). The cornea was clear and was not stained by fluorescein. The Schirmer's 1 test was 15 mm in both eyes in 5 min. The anterior chamber, iris, and lens were normal. Funduscopy was within normal limits. The patient was treated with fradiomycin-methylprednisolone ophthalmic ointment twice daily. After 1 week, her symptoms subsided and there was complete resolution of eyelid dermatitis, including eyelid erythema and eczema (Figure 1C and 1D). The skin prick test was positive at 30 min for eyelash glue and latex, while no positive

response to the negative saline control was recorded. Their positive results were confirmed by a 30-min open patch test. Her total tear IgE score was grade 2 (an elevated total IgE level) according to the Allerwatch® test (Hitachi Chemical Co., Ltd., Tokyo, Japan and Wakamoto Pharmaceutical Co., Ltd., Tokyo, Japan) (1).

Comment

In this patient, acute eyelid dermatitis was presumably caused by direct contact of the periocular skin with eyelash glue containing latex. Latex allergy is a common occupational disease and workers wearing latex gloves are at risk for developing latex allergy. However, acute contact allergy due to eyelash glue is extremely rare and, to our knowledge, has never been described before.

Erythema, papules, vesicles, weeping, edema, and pruritis of the eyelids can have many possible etiologies. The more common causes include atopic dermatitis, contact dermatitis, contact urticaria, rosacea, seborrhea, and psoriasis (2,3). Contact dermatitis, which is a type IV delayed hypersensitivity reaction to rubber additives, is the most common manifestation of latex rubber allergy (4). On the other hand, type I allergic reactions are less common, but can cause rhinoconjunctivitis, asthma, anaphylaxis, and contact urticaria, which occasionally affects the peri-ocular region (5). Contact urticaria

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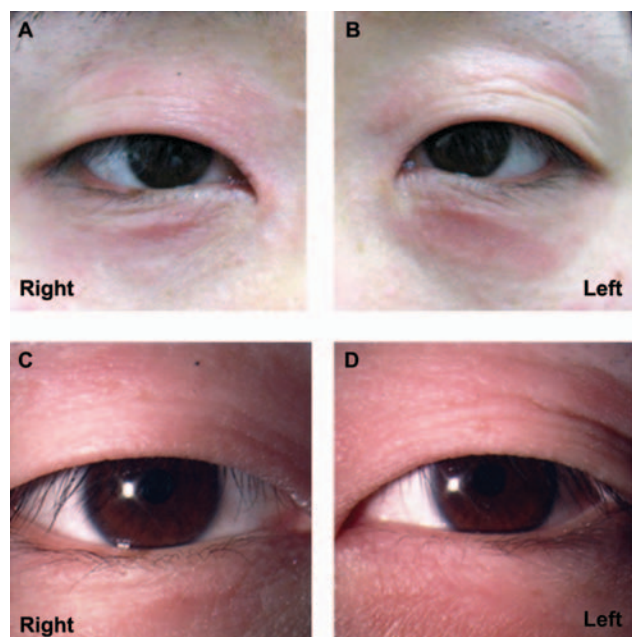


Figure 1. Ocular findings before (A, B) and after (C, D) treatment. Note the bilateral eyelid dermatitis caused by false eyelash glue (A, B). After 1 week of treatment with a topical steroid ointment, lid swelling has resolved (C, D).

is caused by direct contact with certain substances. Eruptions commonly appear within an hour after contact and this allergy results in erythema, pruritus, burning, and urticaria. Rubber latex protein allergy is defined as a reaction against water-soluble proteins contained in natural rubber products. Sensitization to latex proteins can cause immediate IgE mast cell-mediated reactions in allergic persons. Histamine released from mast cells causes increased vascular permeability and tissue edema (Type I hypersensitivity). Mast cells also contain

mediators that cause delayed inflammatory effects (Type IV allergic response). Our patient developed bilateral eyelid erythema after attaching her false eyelashes with latex-containing glue, suggesting that the patient may have developed Type I allergy and subsequent Type IV allergy to latex-containing glue. Eyelash glue can contain various additives that may cause allergic reactions such as contact dermatitis and contact urticaria. Like any type of makeup, therefore, eyelash glue should be tested on the wrist (by a patch or skin prick test) before it is used on the eyelids.

This report highlights a hypersensitivity reaction to eyelash glue and emphasizes that caution is needed when eyelash glue is used by a person with latex allergy. Latex-free eyelash glues are now available in supermarkets and health food stores. Treatment with topical steroid ointment can achieve quick resolution of eyelid dermatitis.

Declaration of interest

The author declares no conflicts of interest.

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