

Eyelid dermatitis due to sodium metabisulfite

Contact Dermatitis 2006; 55: 249–250

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Key words: allergic contact dermatitis; eye medication; eyedrops; ophthalmics; preservative.

Sodium metabisulfite is frequently used as an antioxidant additive and preservative (E 223) in food and beverages, in several pharmaceutical preparations and as a fixative in photography industry. Contact allergy to sodium metabisulfite has rarely been described and most reported cases were due to occupational exposure (1). At risk are workers of photography, pharmaceutical industry and food handlers, for example hand eczema was observed in a salad maker, a pastry worker and a baker (2–5). Non-occupational contact dermatitis due to sodium metabisulfite was recently reported for some topical medications including anaesthetic preparations, anti-haemorrhoidal, glucocorticoid and anti-fungal creams (6–12).

Case Report

A 67-year-old female with a past medical history of glaucoma had been using various eyedrops for the last 27 years. 3 months before initial presentation, she had undergone surgery for nasolacrimal duct obstruction. Subsequently, application of Vistagan-Liquefilm™ 0.5% eyedrops (containing levobunolol-hydrochloride, benzalkoniumchloride, disodium

edetate and sodium metabisulfite) resulted in eyelid dermatitis. With discontinuation of Vistagan-Liquefilm™ 0.5% eyedrop application, a subsequent improvement of eczema occurred. Allergic contact dermatitis was suspected and patch testing was carried out with European standard series, an ophthalmic series and fragrance series. 2-fold positive reactions for sodium metabisulfite 1% (vas.) were observed at day 2 (++), day 3 (++) and day 4 (++).

Discussion

Our patient had a chronic usage of numerous ophthalmic solutions due to her long history of glaucoma. The onset of periorbital contact dermatitis occurred with application of an ophthalmic solution containing a beta-blocking agent (levobunolol) after nasolacrimal duct surgery. Patch testing revealed a 2-fold positive reaction to the preservative sodium metabisulfite.

Allergens identified in topical ophthalmics include antibiotics, antivirals, beta-blockers, mydriatics, anaesthetics and preservatives, such as benzalkonium chloride, thimerosal and phenylmercuric acetate (13). Contact allergy to sodium metabisulfite has rarely been reported so far leading to the increasing usage of this agent as a preservative by manufacturers of cosmetics and medications. With increasing usage of sodium metabisulfite as a preservative in ophthalmic solutions, routine testing for sodium metabisulfite in patients with eyelid dermatitis will be necessary to detect possible sensitization to this compound as cause for periorbital eczema (14–16).

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