Allergic contact dermatitis to phenylephrine

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Sir,
Dermatitis of and around the eyes is common. Allergic contact reactions with phenylephrine are rare despite its extensive use as a mydriatic agent by ophthalmologists. We report, presumably, the first case from India of allergic periorbital dermatitis due to phenylephrine.

A 40-year-old woman was referred to the dermatology outpatient with acute-onset edema and erythema of both eyes associated with watering, a burning sensation, and moderate discomfort, of 24 h duration. Questioning elicited the history of use of phenylephrine 10% eye drops thrice at 5 min intervals in the ophthalmology outpatient department the previous day prior to fundus examination. She denied use of any other medications or cosmetics in or around the eyes. Her medical records revealed the use of phenylephrine eye drops 8 months back when she was diagnosed to have presbyopia. At that time, its use had been uneventful. Her general physical examination was within normal limits. Cutaneous examination revealed marked periorbital erythema, edema, and conjunctival congestion, along with acute eczematous lesions on both cheeks with a streaky pattern extending on to the neck [Figure 1]. She was treated with a short course oral prednisolone, starting with a single morning dose of 40 mg that was tapered to 10 mg over 15 days. She was also prescribed topical hydrocortisone 1% cream, tablet hydroxyzine hydrochloride 10 mg thrice a day, and topical eye drops containing nepHazoline 0.01% and chlorpheniramine 0.1% with complete resolution of lesions. Four weeks later, a patch test was performed with standard cosmetic series and eye drops containing 10% aqueous solution of phenylephrine with 0.5% chlorbutol. After 48 h, the patch test was positive (3+) to the eye drops; five controls tested were negative.

Phenylephrine is α-receptor sympathomimetic drug exhibiting vasoconstrictive activity and is frequently used in ophthalmology as a mydriatic agent and nasal decongestant in topical formulations. Local complications like conjunctival irritation, corneal edema, or release of iris pigment into the anterior chamber and systemic cardiovascular symptoms such as hypertension are rare. [1] Allergic contact dermatitis to phenylephrine has been reported on many occasions from different parts of the world. [2-3] In the largest documented series Herbst et al. performed retrospective analysis of 1641 patients with periorbital dermatitis. Of these, 1053 were diagnosed as allergic periorbital dermatitis and 43 (4.1%) showed positive patch test reaction to phenylephrine. [4] Borch et al. observed a higher frequency (15%) of positive reaction to phenylephrine in their series of 32 patients. [5]

There is no generally accepted commercial ophthalmic series available for patch testing. Moreover, the composition of an ophthalmic series would require continuous modification to keep pace with the changes in the use of specific ophthalmic drugs in practice. In addition, the patient’s own experience of using the drug may modify its composition. [6] Difficulty in patch testing the ophthalmic drug series can be overcome by obtaining a patch test with phenylephrine itself. [7] The present case highlights the need for inclusion of phenylephrine in the standard patch test series of dermatologists.

Figure 1: Erythema and edema of eyelids with conjunctival congestion and eczematous reaction over cheeks and neck

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eye care/cosmetic products should also be tested. Though phenylephrine is widely used by ophthalmologists in India in nonhypertensive adults as a mydriatic agent to obtain maximum pupillary dilatation prior to fundus examination and assessment of refractory errors, allergic contact dermatitis has not been reported from this country so far. This may be partly due to a low index of suspicion or failure to perform patch tests in patients with transient and self-healing periorbital dermatitis.

REFERENCES


Comparison of two diluents of 1% methoxsalen in the treatment of vitiligo

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Sir,
The major nonsurgical repigmenting therapies for vitiligo include psoralsens and corticosteroids, used both topically and systemically.[1] Around 1% of the world’s population has vitiligo, which causes a patchy loss of skin color. The methods currently available to treat vitiligo are largely unsatisfactory and vary widely between cultures and within health systems.[2] Potent topical steroids used along with psoralsens and ultraviolet or sun exposure are the most effective forms of therapy for localized vitiligo.

This study was done to evaluate a new diluent in the treatment of vitiligo. Traditionally, eau de cologne or spirit or water is used to dilute methoxsalen for topical PUVA therapy. Eau de Cologne contains a mixture of citrus oils, including oils of lemon, orange, tangerine, bergamot, lime, grapefruit, and nerolin, in a base of dilute ethanol (70-90%).

Ten patients with essentially bilateral and symmetrical lesions were enrolled in a randomized, right/left comparative study of 2 months’ duration. Ten patients (6 females and 4 males) in the age-group of 15-50 years were included in this study; all of the subjects had localized vitiligo, affecting less than 20% of the body surface area. The average age of the patients was 29.8 years (range 15-50 years) and they had had vitiligo for 2-4 years (average 1.7 years). Lips and tips variety of vitiligo was not included. Pregnant and lactating mothers were not included.

For therapy we used a topical psoralen, 1% methoxsalen, diluted with lipid-free lotion (Cetaphil® lotion, Galderma Laboratories) on the right side of the body and with eau de cologne on left side of body.

Cetaphil® lotion is composed of cetyl alcohol (2.65%) and stearyl alcohol (0.26%) in a propylene glycol base. Clobetasol propionate cream (0.05%) was applied in the night for all patients. All patients were advised to dilute 1% methoxsalen lotion with lipid-free lotion (Cetaphil® lotion) for use on the right side and with a similar amount of eau de cologne for use on the left side of body; this was to be applied with a brush on the affected area on alternate days 30 min before sun exposure between 10 am to 2 pm. Sun exposure was initially for 2 min and was gradually increased by 1 min every 10 days. After sunlight exposure, the treated areas were cleaned with soap and water.

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