



CONTACT DERMATITIS AND OCCUPATIONAL DERMATOSES

## ALLERGIC CONTACT DERMATITIS TO OPHTHALMIC MEDICATIONS: A SERIES OF CASES

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**Background:** The use of topical treatments in ophthalmologic therapy, particularly glaucoma and cataract, is an important cause for the development of allergic contact dermatitis (ACD), on the periorbital region. Preservatives, antibiotics, glucocorticoids and beta-blockers eye drops are currently defined as drugs with the highest sensitizing potential. In the past, a large proportion of ACD cases were attributed to eye drops preservatives, especially, benzalkonium chloride, EDTA and thimerosal. Nowadays, recent literature points to pharmacologically active substances, as the main triggers of sensitization, in this clinical scenario. The unavailability of contact test batteries containing substances of ophthalmological use, mainly without preservatives, makes the diagnosis of this entity difficult, besides of the probability of false-negative results.

**Observation:** In the present report, we describe five patients treating glaucoma whose developed ACD induced by the use of eye drops. We performed in all 5 patients the cutaneous patch tests using the standard patch test of Brazilian Group of Contact Dermatitis, the cosmetic standard patch test and their continuous use eye drops, including the development of active principles without preservatives. All patients tested presented positive results for the following substances: patient 1 (Timolol +/++++); patient 2 (Prednisone +/++++); patient 3 (Thimerosal +/++++), patient 4 (EDTA+/++++), and patient 5 (Brinzolamide +/++++). We withdrew the use of commercial eye drops and changed them for chemically unrelated eye drops in 2 patients and surgical approach was opted for the three other patients, with resolution of their ACD.

**Key message:** The ACD diagnosis due ophthalmic medications can be challenging, since many different agents can cause it, and the sensitivity of these cutaneous tests is low. Thus, the early diagnosis is essential to avoid the complications related to ACD on the skin and ocular disorders related to chronic periorbital eczema (keratoconus, secondary infections, eyelash loss and changes in the lacrimal function).

