EYELID CONTACT ALLERGIC ECZEMA CAUSED BY TOPICAL KETOROLAC TROMETHAMINE 0.5%

ECCEMA ALÉRGICO DE CONTACTO PALPEBRAL POR KETOROLACO TROMETAMOL 0,5% TÓPICO

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ABSTRACT

Clinical case: A 65-year-old man had been treated with eye-drops containing NSAIDs (Ketorolac). He developed conjunctival injection, edematous swelling of the eyelids and periorbital dermatitis due to a contact allergy. Allergy to NSAIDs is uncommon.

Discussion: This is an unusual case because topical application of ketorolac is safe in the vast majority of ophthalmologic patients. However adverse events associated with Ketorolac are similar to that of other NSAIDs (Arch Soc Esp Oftalmol 2006; 81: 213-216).

Key words: Allergic, contact eczema, Ketorolaco, asthma, oedema, dermatitis.

INTRODUCTION

The use of topical non-steroid anti-inflammatory drugs (NSAIDs) in ophthalmology is broadly extended for a large variety of pathologies such as allergic conjunctivitis, vernal conjunctivitis, inflammation of the anterior segment, cystic macular edema, for prevention of surgical myosis, treatment of postop eye inflammation and after refractive surgery in order to reduce inflammatory processes mediated by prostaglandines.

Allergy eczema is a skin intolerance to different exogenous and endogenous agents which unleashes a type 4 hypersensitivity reaction (with cells or belated). It causes a superficial skin inflammation with the concurrence of several elementary lesions:
erithema, vesicle, erosion, exudation, scabs, exfoliation and lichenification (1). Skin and cosmetic preparations are the main cause of contact allergic eczema in eyelids. Clinical signs include conjunctival injection, blefaritis, periorbital dermatitis and palpebral edema with pruritus (2).

Ketorolac tromethamol 0.5% is a second-generation topical NSAID of the pirrole-pirrol group, a white salt in aqueous solution which inhibits the cyclo-oxygenase enzyme which is essential for biosynthesis of prostaglandins.

**CASE REPORT**

A 61 year-old male who went to the urgency ward with erithematose-descaling lesions in upper and lower eyelids, suppuration, formation of skin scabs and pruritus. This condition was labelled as contact allergic eczema in scabbing exudative phase (fig. 1). The patient did not refer reduction in visual acuity. The exploration revealed grade 2-3 conunctival hyperemia, negative cornea fluoresceine, intense follicle-papillary reaction and serous secretion, as well as cortical-nuclear cataracts due for surgery. Intra-ocular pressure and eye fundus were normal.

The patient’s history showed that he was being prophylactically treated prior to the cataract surgery and had been applying Ketorolac trometamol (Acular™, Allergan SA, Tres Cantos, Madrid, Spain) for four days as well as Norfloxacine Chibroxin, Merck Sharp & Dohme de España, S.A.; Madrid, Spain) three times a day.

Said applications were withdrawn and the urgency Ward administered 60 mg of intramuscular metilprednisolone and fluocynilone acetoni ointment. After two weeks, the patient’s lesions improved (figs. 2 and 3).

The patient was referred to the allergy service for skin testing, «True test» for Ketorolac, Norfloxacine and Phenylefrine. The «True test» made with undiluted eye drop solution and readings at 48, 72 and 120 hours gave positive results for Ketorolac and Phenylefrine (fig. 4).

**DISCUSSION**

The use of topical non-steroid anti-inflammatory drugs (NSAIDs) in ophthalmology is broadly extended for a large variety of inflammatory processes such as allergic conjunctivitis, vernal conjunctivitis, inflammation of the anterior segment, cystic macular edema, preop and postop eye surgery and the like. However, there are multiple adverse reactions associated to their topical use such as itching, reduction of corneal sensitivity, keratopathy, ulcerations, corneal and scleral thinning and even corneal perforation (3).

Eczema is a dynamic process which goes through several stages: an acute stage and a chronic stage. In the former, three phases are identified, the erithema and edema phase, the vesiculization phase and exudation phase, in which the vessels break and leave small erosions through which an abundant serous exudation flows which, upon drying, forms scabs. This is the stage our patient was in (1).

Clinical tests with Ketorolac showed that the most frequent adverse reactions are red eyes, temporary irritation and itching as well as minor symptoms such as hyperemia, swelling below the eye and slight palpebral edema. According to these criteria, a review which included 1,055 individuals who were administered Ketorolac in clinical pharmacology and essays, proved that only 32 (3%) exhibited allergic reactions. Under the same criteria 20 out of 801 (2.5%) of the patients treated with the excipient exhibited an allergic reaction (file data, Allergan, Inc. Syntex study report CL5654, Ophthalmology clinical research department. Ketorolac tromethamine ophthalmic solution 0.5 %: integra-

**Fig. 1: Contact allergic eczema involving the four eyelids. Erithematose-descaling lesions in upper and lower eyelids, suppuration and formation of cutaneous scab lines.**
Palpebral eczema due to Ketorolac

Fig. 2 y 3: View of the eyelids after two weeks of treatment with fluocinilone acetonide (Gelidina) three times a day for 14 days. The scab and exudative lesions have disappeared.

Fig. 4: Allergy skin tests, «True test» for Ketorolac, Norfloxacine and Phenylefrine. The «True test» with undiluted eye drop solution was positive for Ketorolac (lower right) and Phenylefrine. The patient exhibited sensitivity to wool alcohols, mixtures of caines and neomocine.

With systemic administration, the quinolones exhibit adverse effects including gastro-intestinal upset, arthropathy in young patients, interstitial nephritis, hematuria, kidney failure, etc. A relevant characteristic of quinolones is their phototoxicity which seems to be the action mechanism causing cutaneous photosensitivity, mainly in elderly people with concomitant conditions which have required prolonged previous antibiotic treatment. We have found in medical literature only one case of eyelid edema and slight reddening of the eye after the topical administration of cyprofloxacine in a study of 31 cases which had adverse effects to quinolone.

The case presented herein is the first we know of a bilateral contact allergic eczema involving the four eyelids after the administration of 0.5% Ketorolac tromethamol.

REFERENCES