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**Case Report**

# Allergic Contact Dermatitis to Eye Drops : Keep an Eye on it!

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**Introduction**

Allergic contact dermatitis (ACD) caused by topical ophthalmic medications, which is often overlooked in eye diseases [1] is most often characterized by eczematous lesions involving the eyelids or periorbital skin, whereas conjunctivitis only rarely occurs [2]. The thin epidermis of the periorbital skin renders eyelids particularly sensitive to hapten penetration and subsequent ACD [3]. Topical ophthalmic agents represent an important group of haptens. Sensitization rates to ophthalmic medications are difficult to ascertain and likely are underreported because practitioners and patients empirically switch preparations without confirming sensitivity.

**Case Report**

A 50-year-old patient came to us with swelling and redness on the eyelids and the periorbital area. These complaints were associated with severe itching and a burning sensation around the affected areas. The patient also complained of eye burns accompanied by photophobia. The examination revealed erythema and edema on her eyelids and the periorbital area. An ill-defined erythematous patch surmounted by yellowish crusts observed on the left side (Figure 1). During the interrogation, the patient revealed that he had given a bilateral intravitreal injection 5 days before his consultation with aflibercept, which belongs to the class of drugs called anti-neovascularization agents, to treat macular degeneration. The patient felt intense itching around the eyes a few hours after the injection and the lesions were noted the next day. The patient was managed with local physiological saline care, a topical antibiotic and dermocorticoids with good progress (Figure 2). The patient was referred to his ophthalmologist to discuss the treatment again and listed the drugs used during the procedure.

**Discussion**

ACD is a systemic disease occurring due to hapten mediated inflammation. It occurs in response to a variety of allergens, including topically applied ophthalmic drugs. Topically applied ophthalmic drugs are a potential cause of ACD of the periorbital region [3]. ACD can occur in response to any component of the e/d preparation. A huge list of ophthalmic drugs exists which have a role in causing ACD. The notable classes include beta-blockers such as timolol and levobunolol, antibiotics, parasympathomimetics like pilocarpine, sympathomimetics like apraclonidine, brimonidine and dipivefrine, carbonic anhydrase inhibitors like dorzolamide, and prostaglandins like latanoprost [4]. It is important to identify the causative agent and the pharmacologically related agents (with which there can be cross-sensitization), so that the susceptible patient can avoid preparations containing them in the future. Viramme et al. has studied sixteen cases of EACD after intravitreal injections and have been published [5]. The allergens were phenylephrine (9/16), isobutadine ophthalmic solution (5/16) and sodium metabisulfite (3/16), and none of these were directly related to anti intravitreal injections - VEGF. There was so far no evidence of by an anti-VEGF intravitreal injection. If ACD of the eyelids occurs after intravitreal anti-VEGF injections, all topical agents applied during the process should be tested to avoid unnecessarily depriving the patient of this effective treatment [6].

So any ingredient of the e/d formulation can trigger ACD. However, as e/d are the most commonly prescribed medication by any ophthalmologist and form the mainstay of treatment of ophthalmic patients, their use cannot be stopped. However, caution can be exercised while prescribing them, especially in patients who have some history of ACD or any other form of allergy. In our patient, ACD could have been due to any one of the ingredients of the e/ds.



**Figure 1: Patient with Allergic contact Dermatitis involving the Eyelids.**



**Figure 2: Control Photo of our Patient after 72 hours of treatment.**

#### Declaration of Interests: None

The patient approved the publication of his photos by consent.

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