Case Report

A CASE REPORT ON THE BEE STING OF THE CORNEA

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ABSTRACT

Background: *Although bee stings are frequent in our surroundings, conjunctival and corneal stings are quite uncommon. Bee venom may cause various symptoms, from acute blindness to mild conjunctivitis. Here, we describe the example of a little girl with a bee sting on her cornea that caused a serious loss of eyesight.*

Corneal bee sting injuries may be toxic, immunologic, or penetrating, or they might mix all three. Rather than being caused by a tissue sting, the lesion results from the chemical compounds' localized effect.

Medicines may be used to treat bee stings; however, surgery may also be necessary if the situation worsens or there is no improvement.

Our patient underwent several treatment alternatives and is now awaiting a corneal transplant..

CASE REPORT

The patient, a seven-year-old girl, was evaluated by a local ophthalmologist in December 2010 after presenting to our unit with a bee sting on the cornea almost four months earlier (in September 2010). Fluorescence was found to be diffusely stained, and the cornea seemed edematous. In addition to systemic antibiotics and analgesics, she was started on topical antibiotics, steroids, and mydriatics. The same ophthalmologist examined her again a week later and prescribed topical antiglaucoma medication.

In December 2010, she arrived at a different facility due to ongoing corneal edema, a blurry and shallow anterior chamber, and limited vision in the afflicted eye, limited to light perception. An opacity had formed at the biting site.

Examining the eyes revealed ectropion uvea, traumatic mydriasis, a complex cataract, and elevated intraocular pressure. In addition to topical antibiotics, steroids, and antiglaucoma drugs, she was prescribed systemic acetazolamide.

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In December 2010, she came to see us with photophobia, hazy vision, and discomfort. Examining the afflicted eye revealed a shallow and hazy anterior chamber, diffuse corneal edema, and an IOP of 34 mm Hg.

The use of topical steroids and antiglaucoma drugs was maintained. Her health had not improved when she was assessed again in February 2011. In March 2011, she had intracameral triamcenolone, but there was no discernible improvement. After a normal B-scan in May 2011, she had an IOL implant and a left lens matter aspiration at a different facility.

She came to us with discomfort, photophobia, and clouded vision once again a year later. With the left eye's intraocular pressure at 40 mmHg, vision was limited to the ability to perceive hand movements. The cornea had vascularization and was opaque. She had a trabeculectomy at our hospital in December 2011.

During surgery, the iris was so wedged up against the rear of the cornea, and the anterior chamber was so shallow that a peripheral iridectomy was not feasible. After the drainage procedure, there was a flat bleb and a 30 mm Hg post-operative intraoperative pressure. Despite topical dorzolamide and timolol combination therapy, she had opaque and vascularized corneal opacity and an intraocular pressure of 30 mm Hg when she was last examined in August 2014. She

is now awaiting corneal transplantation.

DISCUSSION

Bees are members of the order Hymenoptera of insects. The stinger is made up of a genuine portion that adheres to tissues and pulls the venom glands along with it. Phospholipase A, Mellitin, Apamine, Hyaluronidase, and a Mast Cell Degranulation Peptide are just a handful of the complex molecules that make up the toxin, together with melittin, phospholipase A accounts for 75% of the venom. It operates on red blood cells and other cells, producing hemolysis and membrane rupture. Inflammatory effects are caused by melittin and potassium channel-blocking neurotoxin Apamin [1].

Although reports of bee stings in the cornea are uncommon, the clinician has significant challenges when they occur.

In many different cultures, the compounds found in bee venom have been utilized to cure various ailments, including gout, sciatica, rheumatism, and dropsy. Not only have trained doctors employed it but so have alternative therapists [3].

After stinging, the bee dies, leaving the sting and the remaining parts of its body in the same location. The area that stings continuously releases poison [4].

Pupil dilatation and corneal endothelium necrosis result from the toxin entering the anterior chamber. Following this, the endothelium multiplies and covers the front surface of the iris as well as the angle of the chamber. Due to the damage, the iris sticks to the outer cornea, narrowing the corneal angle. Glaucoma ultimately results from this [5].

This system was also functioning in our patient. During trabeculectomy on this patient, peripheral iridectomy was not feasible due to the iris's adhesion to the rear of the cornea.

There is disagreement about whether or not the stinger should be removed; some argue that it is inactive and shouldn't be removed if it isn't causing any problems [6].

One trial included a patient with panuveitis; vitrectomy was used to treat the condition and was thought to be successful [7].

Wasp stings cause less severe responses in the eyes than bee stings [8].

CONCLUSION

This detailed case record underscores the complex demanding situations posed by using corneal bee sting injuries, necessitating a multidisciplinary technique. The affected person's adventure serves as a poignant instance of the profound and enduring impact of such uncommon ocular incidents.

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