Intractable Glaucoma Following Bee Sting Injury- A Case Report

Abstract

Bee sting injuries of the eye are uncommon. However bee sting injury to the eye causes extensive damage to the eye. Literature review showed corneal damage, uveitis as the commonly reported damage to the eye following the bee sting injury. There has been only one case report of glaucoma following bee sting injury. We report another case of glaucoma following bee sting injury.

Key words: bee sting, intractable glaucoma, corneal endothelial damage

Introduction

Bee sting injury to the eye is a rare ocular trauma. The venom injected through the sting causes toxic and immunological reactions which causes severe ocular damage. There are various reports on bee sting induced corneal decompensation [1, 2, 3, 4] andoptic neuritis [6, 7]. However, there is only one report stating that Bee sting causes glaucoma1. In this article we would like to report a case of intractable glaucoma following Bee sting injury to the eye.

Case report

A 25-year-old man presented to our department with history of a Bee sting injury in his left eye, four hours after being stung. He was first seen by a physician who tried to remove the stinger. As the physician could not remove the stinger the patient was then referred to our institution for further management. The patient complained of irritation, foreign body sensation and blurring of vision in the left eye. On presentation, his best corrected visual acuity was 6/6 in the right eye & 6/60 in the left eye. Slit lamp examination of the left eye showed circumcorneal congestion, corneal infiltrate with the bee stinger in the center of the infiltrate. One end of the Bee stinger was partly entering into the anterior chamber [fig 1]. The surrounding cornea was edematous. Anterior chamber revealed grade 3 cells. The patient was taken up for surgery immediately and the stinger was removed under topical anesthetic. Postoperatively patient was treated with topical steroid and antibiotic combination [G. Chloramphenicol & Dexamethasone] and G Atropine 1% TID. During the post-operative period the intraocular pressure measured with Goldmann applanation tonometer was approximately 40 mm of Hg (mires were irregular). Oral acetazolamide tablets 250mg four times a day and G Timolol maleate 0.5% twice daily was then added. He was discharged on 5th postoperative day with the above medications. He was called for review after three days.

On review (8 th post-operative day), his visual acuity in the left eye had decreased to counting finger 1 meter. Examination of the left eye showed severe corneal edema with multiple bullae. However, there was no variation in the size of the infiltrate[fig 2]. Lens showed an anterior sub capsular cataract. Digital intraocular pressure was high. Patient was started on oral glycerol 60ml twice daily and G. Brimonidin tartarate 0.2%TID in addition to Tab . Acetazolamide & G. Timolol maleate drops which he was already on.

As the intraocular pressure was not controlled with the maximum medication, trabeculectomy was performed.

In the postoperative period his visual acuity improved to counting fingers one and a half meter. Corneal bullae had reduced in number but the cornea was still hazy. Good bleb was seen and digital intraocular pressure was almost normal. The patient was discharged on topical steroid and antibiotic eyedrops [G.Chloramphenicol & Dexamethasone] and G Atropine 1% TID.

On follow up, the corneal edema remained unchanged and he developed an encysted bleb [fig 3]. Intraocular pressure was high again and the patient was restarted on G. Timolol maleate 0.5% twice daily. The patient did not regain his vision and his cornea remained hazy further follow up.

Discussion

Bee sting related ocular injuries are rare. It can lead to serious sight threatening complications. When a bee stings, the venom is injected as a reflex action. The bee venom consists of both the basic and acidic components. The allergens and the toxins are the nonenzymatic polypeptides, enzymes, and biological amines which are in turn responsible for the immediate hypersensitivity reactions. The various components of the toxin are melittin, apamin, phospholipase A2 and B, and hyaluronidase. These toxins cause sterile corneal infiltration, toxic keratopathy, uveitis and cause glaucoma due to toxic trabeculitis[1]. Literature search showed only one case report of bee sting induced glaucoma. Teoh SC et al in their article, “corneal bee sting” reported bee sting induced corneal epithelial defect, anterior uveitis, intractable glaucoma, traumatic cataract, toxic optic
neuropathy and corneal scarring.

Our patient had both toxic keratopathy and intractable glaucoma for which patient underwent trabeculectomy. Bee sting induced glaucoma does not respond well to treatment. SC Teoh et al reported the use of Mitomycin – C at the time of trabeculectomy. However we did not use Mitomycin-C during trabeculectomy. Literature search showed varied response to treatment in ocular Bee sting injuries[1, 2, 6, 7] Majority of the case reports reported unfavorable outcome to treatment. Our patient response to the treatment was not good.

We conclude that bee sting induced glaucoma is a rare, but is a very important vision threatening complication and is very difficult to treat.

References

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