A Case of Corneal Bee Sting

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Introduction

Corneal injury from bee sting is relatively rare and the controversy remains as to whether the stinger should be removed or not. In this patient, the stinger was successfully removed, leading to vast improvement of vision.

Case Report

blurring of vision for 3 days. He gives history of a foreign body entering his left eye while riding his motorcycle prior to the onset of pain. The patient is diabetic but was not on proper follow up.

The vision on presentation was hand movement. The conjunctiva was very injected and there was corneal oedema with extensive Descemet’s folds. An epithelial defect was noted adjacent to the limbus at 7 o’clock, measuring 1 x 1.5mm with surrounding infiltration measuring 2.2 x 3.8mm.

Careful examination revealed a foreign body obscured by slough at the centre of the epithelial defect. It was brownish and thread-like with a bent tip and measured 0.3mm in length. It became apparent that a bee stinger was embedded in the corneal stroma (Figure 1). Fortunately, it did not penetrate into the anterior chamber. Details of the anterior chamber could not be clearly seen, however it appeared deep and there was no hypopyon.

The patient’s fasting blood glucose was 12mmol/L and white cell count was of 13.5 X 10⁹/L. Corneal scraping was performed and sent for routine stains and cultures.

The embedded bee stinger was removed from the corneal successfully at the silt lamp with the aid of suction forceps. He was then admitted to the ward for intensive topical (Moxifloxacin and Gentamicin) and intravenous (Ciprofloxacin) antibiotics. Treatment for diabetes was reinstituted.

The ulcer slowly improved over 12 days of hospitalization (Figure 2). Stains and cultures from the corneal scraping were negative. Antibiotic eye drops were tapered slowly and a steroid eye drop (Prednisolone 1%) was added. On discharge, vision had improved to 6/12. On follow up a month later, the ulcer had completely healed leaving a faint cornea scar.

Conclusion

Removal of the bee stinger with intensive topical and systemic antibiotics proved to be an effective treatment for our patient with a corneal bee sting injury.

Discussion

Ocular bee sting injuries involving the cornea commonly present with corneal oedema, infiltrates, striate keratopathy and bullous keratits.1-3 Isolated case reports have also described anterior uveitis, hyphema, iris atrophy, cataract, optic neuritis and ophthalmoplegia.3-7 Most complications are thought to be related to the toxic and immunological response to the venom injected. Presentation may differ depending the amount of venom injected as well as the varying composition of venom from different species of bees.5

One of the main controversies is whether the embedded corneal bee stinger should be removed or left in situ.6,7 One school of thought is that the embedded stinger should be left in situ, as an attempt to remove often fails and results in more inflammation due to additional venom discharge during manipulation. A number of case reports found that the stinger remained inert and could safely be left behind if the patient is asymptomatic.8,11

However, others argue that the embedded bee stinger should be removed as soon as possible because the amount of venom released correlates with the duration of contact of the eye with the sting.12

In our patient, the embedded stinger had not reached the anterior chamber and part of it was exposed at the bed of ulcer. Removal was successful without much manipulation which lead to a favourable outcome.

In addition to antibiotics, antihistamines can be considered if there is immunologic-mediated injury.2

References