



## OPTICAL NEURITIS AFTER BEE STING: A CASE REPORT

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### ABSTRACT

A variety of unusual or unexpected reactions have been described occurring in a temporal relationship to insect stings, although there is scarce information regarding the pathogenesis of the majority of these unusual reactions (Reisman, 2005). Acute encephalopathy occurred 8 days after yellow jacket stings, without any other obvious cause (Maltzman, Lee, and Miller, 2000). There have been prior reports of other neurological reactions, myasthenia gravis, peripheral neuritis and Guillain-Barré syndrome related to insect stings. Schiffman et al. (Schiffman et al., 2004) reported on a middle aged woman who sustained both a stroke and ischaemic optic neuropathy after multiple bee stings. As the result of ocular stings, local reactions have occurred with corneal pathology leading to cataracts (Choi and Cho, 2000) (Keller, 1995). Other prior reported reactions to ocular stings include conjunctivitis, corneal infiltration, lens subluxation, and optic neuropathy (Berríos and Serrano, 1994) (Berríos and Serrano, 1994; Song and Wray, 1991).

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## INTRODUCTION

A variety of unusual or unexpected reactions have been described occurring in a temporal relationship to insect stings, although there is scarce information regarding the pathogenesis of the majority of these unusual reactions (Reisman, 2005). Acute encephalopathy occurred 8 days after yellow jacket stings, without any other obvious cause (Maltzman, Lee, and Miller, 2000). There have been prior reports of other neurological reactions, myasthenia gravis, peripheral neuritis and Guillain-Barré syndrome related to insect stings. Schiffman et al. (Schiffman et al., 2004) reported on a middle aged woman who sustained both a stroke and ischaemic optic neuropathy after multiple bee stings.

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As the result of ocular stings, local reactions have occurred with corneal pathology leading to cataracts (Choi and Cho, 2000) (Keller, 1995). Other prior reported reactions to ocular stings include conjunctivitis, corneal infiltration, lens subluxation, and optic neuropathy (Berríos and Serrano, 1994) (Berríos and Serrano, 1994; Song and Wray, 1991).

#### Case report

A 66-year-old woman, whose past medical history was significant only for controlled arterial hypertension and diabetes mellitus, presented at emergency room after being stung by an hornet on the left temporal region of the head. She received an antiseptic medication and then she was discharge. The day after, the patient experienced a severe headache with nausea and vomiting and sudden blurred vision in the left eye. An ocular examination revealed best corrected visual acuity (BCVA) of 20/20-1 right eye and 20/30-2 left eye at distance and 20/20 right eye and 20/200 left eye at near. Pupil examination showed isocoria with no relative afferent pupillary defect.

Motility was unremarkable, as was anterior segment both eyes and the funduscopy examination. Intraocular pressures were 18 mm Hg right eye and 16 mm Hg left eye. A Head computed tomography was performed and resulted normal. There was a delay in the P100 wave of the pattern visual evoked potential (VEP) recording from the left eye, with a normal response in the right eye. The patient received acute treatment with high dose intravenous methylprednisolone (1 gr day for 3 days) followed by 5 days with oral prednisone (1 mg kg). Three days later, no recovery of the visual acuity in the left eye was noticed: neuro-ophthalmic examination showed BCVA of 20/15 right eye and 20/25 left eye at distance and 20/20 right eye and 20/30+1 at near; the pattern VEP was abnormal. A further ocular examination 4 weeks after her sting episode showed BCVA of 20/15 right eye and 20/25 left eye at distance and 20/20 right eye and 20/30+1 at near. Three months after, the patient reported no improvement of the visual acuity in her left eye, and the data was confirmed by a repeated visual examination.

## DISCUSSION

The electrophysiological recordings initially showed a delay in the P100 wave of the pattern visual evoked potential. The data suggests that the optic nerve was demyelinated acutely, and that subsequently axonal loss and degeneration of retinal ganglion cells occurred. On follow-up, no visual acuity recovery was reported.

## Conclusion

It is important that clinicians be aware of this relationship when assessing people with these reactions. Despite the few previously report, in our patient an early corticosteroid treatment was uneffective.

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