



OPTICAL NEURITIS AFTER BEE STING: A CASE REPORT

^{2,3}Maurizio Cavallini,^{1,3,*}Marco Ermete Boido,^{2,3,4}Ilaria Lombardi, ^{2,3}Claudia Aceto and ^{3,5}Tatsiana Volchik

¹Department of General Psychology, University of Padova, Italy

²Department of General Psychology, University of Turin, Italy

³Department of Neuroscience, Studio Medico Associato Mind, Asti Italy

⁴Department of Clinical Psychology and Health, Cardinal Massaia Hospital, Asti Italy

⁵Department of Chemistry, University of Minsk

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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.

*Corresponding author: Marco Ermete Boido

¹Department of General Psychology, University of Padova, Italy

³Department of Neuroscience, Studio Medico Associato Mind, Asti Italy

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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.

REFERENCES

- Berrios, R. R. and Serrano, L. A. 1994. Bilateral optic neuritis after a bee sting. *American Journal of Ophthalmology*, 117(5), 677–8. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/8172283>
- Choi, M. Y. and Cho, S. H. 2000. Optic neuritis after bee sting. *Korean Journal of Ophthalmology*, 14(1), 49. <https://doi.org/10.3341/kjo.2000.14.1.49>
- Keller, M. 1995. Neuritis nervi optici nach Wespenstich. *Klinische Monatsblätter Für Augenheilkunde*, 206(5), 367–368. <https://doi.org/10.1055/s-2008-1035464>
- Maltzman, J. S., Lee, A. G. and Miller, N. R. 2000. Optic neuropathy occurring after bee and wasp sting. *Ophthalmology*, 107(1), 193–5. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/10647742>
- Reisman, R. E. 2005. Unusual reactions to insect stings. *Current Opinion in Allergy and Clinical Immunology*, 5(4), 355–8. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/15985819>
- Schiffman, J. S., Tang, R. A., Ulysses, E., Dorotheo, N., Singh, S. S. and Bahrani, H. M. 2004. Bilateral ischaemic optic neuropathy and stroke after multiple bee stings. *The British Journal of Ophthalmology*, 88(12), 1596–8. <https://doi.org/10.1136/bjo.2004.042465>
- Song, H. S. and Wray, S. H. 1991. Bee sting optic neuritis. A case report with visual evoked potentials. *Journal of Clinical Neuro-Ophthalmology*, 11(1), 45–9. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/1827460>
