



A RARE CASE OF HERPES ZOSTER OPHTHALMICUS WITH SIXTH NERVE PALSY

Ophthalmology

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ABSTRACT

Herpes Zoster ophthalmicus is a localized disease characterized by unilateral or hemifacial vesicular eruptions with pre-eruption unilateral erythema, or localized scalp tenderness. There are very few reports focused on ocular motor palsy / paresis in patients of Herpes Zoster ophthalmicus. We report a patient of abducens nerve / lateral rectus palsy as a result of herpes zoster. The patient developed abducens nerve palsy in the post eruption phase without any other obvious cause.

KEYWORDS

Herpes Zoster Ophthalmicus, Sixth Nerve Palsy

INTRODUCTION

Herpes zoster ophthalmicus (HZO) is the involvement of the ophthalmic division of the trigeminal nerve and represents 10–20% of all cases of herpes zoster.^[1,2] The acute course of HZO is usually benign, however serious ocular complications have been documented. Severity is related to the age of the patient with older patients being affected more severely than younger patients.^[3,4] We report a rare case of Herpes Zoster Ophthalmicus with horizontal diplopia because of lateral rectus palsy or sixth cranial nerve lesion.

Case Report

A 50 year old male presented with extensive facial swelling and excruciating pain. He had a history of fever, lethargy, scalp tenderness for 2-3 days for which he was taking treatment from a physician. Informed consent was taken. On ocular examination, patient had extensive localized vesicular eruptions limited to left half of his face with bilateral periorbital oedema, extensive lid edema of both eyes, left-sided pre-auricular and sub-mandibular lymphadenopathy with extensive neck edema (Figure 1).



Figure 1 showing extensive localized vesicular eruptions on left half of face with bilateral periorbital oedema, extensive lid edema both eyes, pre-auricular and sub-mandibular lymphadenopathy with extensive neck edema

Patient was unable to open his eyes. The vesicular eruptions were distributed over the ophthalmic division of the fifth cranial nerve on the left side. There was bilateral mechanical ptosis but lifting the lid manually revealed no motor deficit or diplopia. There was moderate conjunctival infiltration without any corneal involvement.

Seeing the clinical picture, patient was put on medical management and was advised further investigations. The patient is non diabetic, his renal and liver function were normal. Total cell count revealed an increase i.e. 12000/cumm with a neutrophil dominance. There was a history of headache and fever. A medical and dermatology reference was sought and so patient underwent CSF examination which revealed higher values of IgM antibodies. Other findings of CSF was insignificant. Patient was prescribed oral Acyclovir 800mg 5 times a day, Ibuprofen 400mg 3 times a day, Pantoprazole 40mg once a day, oral multivitamins, cynocobalamine and topical Acyclovir 3% eye

ointment 6 times a day, Moxifloxacin 0.3% eye drops 6 times a day and Lubricant eye drops, Acyclovir 5% skin ointment for skin lesions.

After one week, when the patient reported for follow up he was almost cured of the fresh vesicular eruption (phasing out stage), lid oedema and generalized sickness but he complained of diplopia in primary position.

Further examination revealed abduction deficit in the left eye (Figure 2). There was no head tilt. Cornea, anterior chamber, fundus was normal. Medical reports were favorable at this time. Patient was advised MRI Brain Scan for any intracranial lesion. MRI Scan was unremarkable revealing no systemic cause for the motor deficit. Based on these investigations and presentation it was concluded that this is because of 6th nerve palsy, i.e. left lateral rectus paresis is related to Herpes disease.



Figure 2 showing abduction deficit in the left eye

Patient showed good recovery over next 15 days. Patient was kept on same medical therapy for total 3 weeks with follow up every 3rd day for close observation. Oral antiviral was withdrawn after 3 week therapy and was kept on topical medications with oral multivitamin. Patient recovered from fever and headache completely. Left lateral rectus palsy recovered over next 1 month resolving other visual symptoms like diplopia. Patient was followed up for 6 month thereafter.

DISCUSSION

Herpes zoster ophthalmicus is a sensory neuron disease involving the fifth cranial nerve where the virus stays dormant and wait for the opportunity to attack.^[2] The most common cranial nerve palsy affecting the ocular motility is the sixth nerve while the most commonly involved motor nerve in herpes disease is the third nerve.^[5] The mechanism by which the motor neurons are involved is still not clear but many theories have been put forward. It has been postulated by Brown et al that motor neuritis was independent of the inflammation of any ganglion.^[6] Edgerton postulated that the involvement of the second, third, fourth, fifth cranial nerves is attributable to cavernous sinus inflammation or intracavernous radiculo-meningitis.^[7] Muscle ischaemia remains a strong possibility as a combination of orbital nerve and muscle inflammation. Hence abducens nerve palsy may be caused by localized orbital myositis or lymphocytic cranial motor neuropathy. All these patients of HZO must be added with Neurotropic

drugs in the beginning and must be watched for any association of motor deficit during their follow up course.

CONCLUSION

There are numerous probabilities that either working separately or simultaneously which are responsible for motor nerve deficits along with HZO. These patients warrants close follow up for any motor deficits along with neurotrophic drugs.

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