



## COMPLICATIONS OF HERPES ZOSTER OPHTHALMICUS.

## Ophthalmology

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## ABSTRACT

**Purpose-** To study the complications of Herpes Zoster ophthalmicus. **Methods-** This was a retrospective observational study that involved 52 eyes of 52 patients present with diminution of vision and prodromal pain in a unilateral V1 dermatomal distribution, followed by an erythematous vesicular or pustular rash to the same area. Pain is neuropathic, and some patients describe the sensation as "burning" or "shooting". Complete ophthalmic examination was done in diffuse light including biomicroscopic slit lamp examination, fundus examination with 90D lens and fundus photography. **Results-** A total of 52 patients were examined out of which 28(53.8%) were male and 24(46.15%) were female, out of which 34(65.3%) were taking treatments. Out of total patients, 46(88.4%) patients developed conjunctivitis, 41(78.8%) developed keratitis, 32(61.5%) developed lid scarring, 29(55.7%) developed uveitis, 8(15.3%) developed ptosis, 6(11.5%) developed episcleritis, 4(7.6%) developed post herpetic neuralgia and 1(1.9%) developed retinitis. **Conclusion-** most common patients present at the age group 45-55 year out of which more than half patients were on drugs. Most common complication is conjunctivitis followed by keratitis and least common is post herpetic neuralgia and retinitis.

## KEYWORDS

Herpes zoster, Keratitis, Uveitis, Conjunctivitis, Episcleritis

## INTRODUCTION-

Infection from the varicella-zoster virus (VZV) most commonly occurs in childhood and is spread by airborne, droplet, and contact transmission. Herpes zoster results from reactivation of the latent VZV within a sensory nerve ganglion, often presenting decades after the initial infection. The disease typically presents as a unilateral maculopapular or vesicular rash in a single dermatomal distribution. Herpes zoster ophthalmicus (HZO) is defined as the viral involvement of the ophthalmic division (V1) of the trigeminal cranial nerve (V). While the diagnosis of HZO does not necessarily imply eye involvement, ocular disease occurs in about 50% of HZO cases. Ocular manifestations can include conjunctivitis, uveitis, episcleritis, keratitis, and retinitis. The condition is considered an ophthalmologic emergency due to the risk of vision loss if not quickly identified and treated early in the disease course.[1][2][3]

## MATERIAL AND METHOD

This was a retrospective study that involved 52 patients of Herpes Zoster ophthalmicus complaining of diminution of vision and prodromal pain in a unilateral V1 dermatomal distribution, followed by an erythematous vesicular or pustular rash to the same area were included. Patients were recruited from the OPD of MLB Medical College Jhansi, Uttar Pradesh and followed from 1<sup>st</sup> april 2022 to 31<sup>st</sup> december 2022. It was performed under the Helsinki Declaration of 1975, as revised in 2000. The necessary from the Ethical and Research Committee was obtained for the study.

## Inclusion Criteria

All patients who presented to the OPD of MLB Medical College Jhansi with complaining of diminution of vision and prodromal pain in a unilateral V1 dermatomal distribution, followed by an erythematous vesicular or pustular rash to the same area were included.

## Exclusion Criteria

1. Patients with ocular systemic diseases.
2. Patients with other retinal disorders.
3. Patients with recent intraocular surgery.
4. Patients with the history of trauma.

All patients were subjected to a detailed history taking, had complete ophthalmic examination including visual acuity (VA) measurement biomicroscopic slit lamp examination, fundus examination with 90D lens and fundus photography.

## RESULT-

A total of 52 patients were studied. we included eyes with complain of diminution of vision and prodromal pain in a unilateral V1 dermatomal

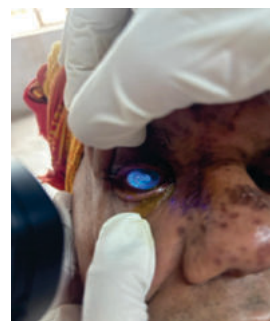
distribution, followed by an erythematous vesicular or pustular rash to the same area were included.

## Table- Distributions of eye structure involvement in Herpes Zoster Ophthalmicus patients.

| No of patients (%) | Complications in HZO patients |
|--------------------|-------------------------------|
| 46(88.4%)          | conjunctivitis                |
| 41(78.8%)          | Keratitis                     |
| 32(61.5%)          | lid scarring                  |
| 29(55.7%)          | Uveitis                       |
| 8(15.3%)           | Ptosis                        |
| 6(11.5%)           | Episcleritis                  |
| 4(7.6%)            | Post herpetic neuralgia       |
| 1(1.9%)            | Retinitis                     |



**Image 1- Showing 52 year old patient with Herpes Zoster having vesicular lesion scarring on the right side forehead, upper lid and nose.**



**Image 2- Showing involvement of cornea (epithelial keratitis).**

**DISCUSSION-**

a thorough examination of the HZO patient may reveal an array of complications, including blepharitis, conjunctivitis, keratitis, uveitis, and secondary glaucoma. Prolonged inflammation and corneal scarring can lead to serious complications, including permanent vision loss. Neurotrophic keratopathy, resulting from dysfunctional corneal innervation, leaves patients more susceptible to corneal abrasions, corneal ulcers, and persistent corneal epithelial defects, even in the absence of replicating viruses or active inflammation. Necrotizing retinitis is an uncommon complication of HZO that can lead to retinal tears, retinal detachment, and subsequent permanent vision changes. Additionally, patients with HZO commonly develop postherpetic neuralgia (PHN) as a result of a peripheral nerve injury. PHN is a chronic painful condition in which herpes zoster pain persists for more than 90 days after the initial rash outbreak. Older age and severe disease are risk factors for PHN, while prior zoster vaccination appears to be protective. In addition to complications directly related to HZO, patients are also prone to secondary bacterial infections.[4][5][6][7]

**RESULTS-**

most common patients present at the age group 45-55 year out of which more than half patients were on drugs. Most common complication is conjunctivitis followed by keratitis and least common is post herpetic neuralgia and retinitis.

**REFERENCES-**

1. HOPE-SIMPSON RE. THE NATURE OF HERPES ZOSTER: A LONG-TERM STUDY AND A NEW HYPOTHESIS. *Proc R Soc Med.* 1965 Jan;58(1):9-20. [PMC free article] [PubMed]
2. Liesegang TJ. Herpes zoster ophthalmicus natural history, risk factors, clinical presentation, and morbidity. *Ophthalmology.* 2008 Feb;115(2 Suppl):S3-12. [PubMed]
3. Weinberg JM. Herpes zoster: epidemiology, natural history, and common complications. *J Am Acad Dermatol.* 2007 Dec;57(6 Suppl):S130-5. [PubMed]
4. Cobo LM. Corneal complications of herpes zoster ophthalmicus. Prevention and treatment. *Cornea.* 1988;7(1):50-6. [PubMed]
5. Catron T, Hern HG. Herpes zoster ophthalmicus. *West J Emerg Med.* 2008 Aug;9(3):174-6. [PMC free article] [PubMed]
6. Hoeksema L, Jansonijs NM, Los LI. Risk Factors for Secondary Glaucoma in Herpetic Anterior Uveitis. *Am J Ophthalmol.* 2017 Sep;181:55-60. [PubMed]
7. Mueller NH, Gilden DH, Cohrs RJ, Mahalingam R, Nagel MA. Varicella zoster virus infection: clinical features, molecular pathogenesis of disease, and latency. *Neurol Clin.* 2008 Aug;26(3):675-97, viii. [PMC free article] [PubMed]