



Q: (Picture of typical HZV V<sub>1</sub> lesion or Hutchinson's sign. Discuss everything and anything?)

### **Epidemiology**

- Annual frequency in American population ~ 2-4%
- Annual attack rate rises with age: 3/1000 between 20 and 49  
10/1000 between 80 and 90
- V<sub>1</sub> involved in ~ 8-56% of cases.
- Ocular involvement in 50-71% of V<sub>1</sub> cases.
- Increasing number of patients who are immunocompromised.

### **Pathogenesis and Histopathology**

**Primary Infection**



**Latent State**

Acute infection:

in CMI

Non

**Reactivation**

**Ganglionitis**

**Centripital spread  
down axon**

**Clinical manifestations of  
VZV**

granulomatous inflammation of iris, CB, choroid.

Chronic infection: Giant cell reaction to Decemet's membrane.  
Granulomatous inflammation of the choroid with  
overlying retinal necrosis.  
Lymphocytic infiltrate of PCN, PCV.  
Perivasculitis.

## Clinical Features

### Dermatome distribution

# V1

1. .Supratrochlear
2. Supraorbital

1. Communicating branch to CG
2. Long posterior
3. Posterior ethmoid
4. Anterior ethmoid
5. Infratrochlear

Lacrimal

Upper lid,  
forehead,  
Superior conj.

Ant & Pos ethmoid sinus  
Both lids, conj, sclera,  
Cornea, iris, choroid  
Tip of nose

Temporal upper  
lid

## Signs & Symptoms

- Prodrome: generalized malaise, fever, H/A
- Skin: hyperesthesia, pain, burning
- Macular rash, vesicles, edema

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## **Ocular Complications of HZO**

### ***Lids***

Entropion

Scarring

Cicatricial ectropion

Ptosis

### ***Corneal***

PEK (51%)

Pseudodendrites (51%)

Ant stromal infiltrates (41%)

Keratouveitis (34%)

Neurotrophic keratitis (25%)

Delayed mucous plaques (13%)

Exposure keratitis (11%)

### ***Canalicular Scarring***

### ***Uveitis***

Anterior (40%)

Sectoral iris atrophy

Diffuse

### ***Secondary Glaucoma (12%)***

### ***Retinitis***

ARN

### ***Neuroophthalmic Involvement***

Cranial nerve involvement

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Disciform keratitis (10%)

CVA, Arteritis

*Conjunctivitis*

*Postherpetic Neuralgia (9 to 20%)*

*Sclera*

Scleritis

Episcleritis

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## **Treatment**

### **Antiviral Drugs**

1. ***Oral Acyclovir 800mg x5/day for 7 days.***  
Greatest benefit (but not confined) within 72 hours.  
Faster resolution of rash, pain & viral shedding.  
Decrease in new lesions.  
Decreased incidence in episcleritis, keratitis & iritis.  
No effect on PHN.
2. ***Oral Famcyclovir 500mg TID for 7 days.***  
Faster resolution of rash, pain & viral shedding.  
Decrease in new lesions.  
Decreased incidence in episcleritis, keratitis & iritis.  
Significantly faster resolution of PHN.
3. ***Topical acyclovir***  
Efficacy not proven.

### **Steroids**

1. ***Topical steroids***  
Indicated for immune keratitis & iritis.
2. ***Systemic steroids***  
Controversial.

## Cimetidine

*Cimetidine 300mg qid x 7 days*

Relief of discomfort, edema, erythema.

Not proven.

## Capsaicin

*Zostrix apply cream 3-6x/day*

Indicated for PHN.

2 to 6 weeks before effect.

## Antidepressants

*Amitriptyline, doxepin, imipramine, desipramine, nortriptyline +/- perphenazine.*

## Surgery

1. Tarsorrhaphy for neurotrophic keratitis.
2. Cryotherapy for trichiasis.
3. Entropion/ectropion repair.
4. DCR + Jones tube for drainage obstruction.
5. Conj flap or tissue adhesive for corneal melting.
6. PKP limited role.

## **Treatment protocols:**

### **a) HZO**

1. Acyclovir 800mg x5/day for ten days if within 72hrs
2. Famvir is alternative better for PHN but prohibitively expensive
3. Steroids if stromal keratitis or uveitis do not have to worry about epithelial prophylaxis
4. Treat IOP as needed

### **b) PHN**

1. Lidocaine cream 5%
2. Amitriptyline 12.5 to 25mg
3. Capsaicin cream (yea right)
4. Pain management team referral (blocks and all that stuff)