

Birmingham and Midland Eye Centre

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OPHTHALMIC INFECTIONS

Guidelines for the management of Herpes Zoster Ophthalmicus

Reactivation of latent varicella-zoster virus (VZV) in the dorsal root ganglia results in a localized cutaneous rash. *Herpes zoster* ophthalmicus (HZO) occurs when *herpes zoster* affects the ophthalmic division of the trigeminal nerve.

1. Clinical Features

Affected individuals typically present with unilateral pain with lesions on the forehead and periocular area. Cutaneous vesicles at the side of the tip of the nose (Hutchinson's sign) indicate nasociliary nerve involvement and a greater likelihood that the eye will be affected, although eye involvement can still occur without this sign.

Ocular involvement includes the following:

- Mucopurulent conjunctivitis
 - Associated with lid vesicles
 - Usually resolves within one week
 - May be associated with a secondary bacterial conjunctivitis
- Episcleritis
- Scleritis
- Keratitis – this begins as punctate epithelial keratitis. Microdendrites may follow approximately 2 days later. One third of patients will go on to have a nummular keratitis (anterior stromal granular infiltrates), of which a small proportion (approximately 5%) will develop a disciform keratitis (disc of corneal oedema, Descemet's folds, keratic precipitates and cells in the anterior chamber).

2. Diagnosis

The appearance of HZO is sufficiently characteristic and a clinical diagnosis is usually accurate. If the clinical features are not typical, Polymerase chain reaction (PCR) technique can be used to detect VZV.

3. Management

3.1 Systemic therapy

Systemic antiviral therapy is mandatory for patients presenting with HZO, to help reduce potentially sight-threatening complications. Aciclovir orally 800 mg, 5 times daily for 7 days is well tolerated, safe and efficacious. The earlier that antiviral therapy is initiated, the higher the likelihood of clinical response, but benefit may still be conferred when treatment is started more than 3 days after the onset of lesions. This is particularly the case if new vesicles continue to form. Although antiviral therapy reduces the duration of pain during the acute phase, it does not reliably prevent postherpetic neuralgia.

Systemic corticosteroids are controversial in the management of HZO. They accelerate the rate of cutaneous healing and alleviation of acute pain, but do not affect the incidence or duration of postherpetic neuralgia. When used, the standard regime is oral prednisolone, 40 mg per day, tapered over a 3 week period. The use of systemic steroids without concomitant antiviral therapy is contraindicated.

3.2 Topical therapy

- Bacterial conjunctivitis can be treated as per protocol.
- Corneal lesions are insensitive to antiviral agents. Epithelial keratitis can be treated with topical preservative free lubricants (e.g. Refresh Ophthalmic® four times a day) Stromal and disciform keratitis can be treated with a tapering dose of topical steroids (e.g. prednisolone 0.5% eye drops two to four times a day reducing over a few weeks based on clinical response).
- For anterior uveitis, topical steroids should be used with cycloplegic agents.
- Raised intraocular pressure should be controlled with antiglaucoma medications.

4. References

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