Varicella-zoster ophthalmicus a special case

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It is accepted that antiviral treatment commenced within 72 hours of varicella-zoster virus reactivation (shingles) will reduce the intensity and duration of pain, including post-herpetic neuralgia. Involvement of the first division of the trigeminal nerve, as happens in 15% of zoster reactivations, presents a special case because antiviral therapy, even if commenced after the 72 hour cut-off, reduces and sometimes prevents ocular complications.

It is important for doctors to know when to use antivirals and who to refer because with our population aging, varicella-zoster ophthalmicus (VZO) presentations are likely to be encountered with increasing frequency. Morbidity from ocular involvement is common and may be devastating.

Special considerations

Paraesthesiae usually precede the rash by 1-7 days, which means the onset of the rash may be a questionable marker for the start of viral activity. The rash can sometimes be absent or subtle.

Any involvement of the nasociliary branch of V1, resulting in vesicles on the side or tip of the nose (Hutchinson's sign), is strongly predictive of ocular involvement.

Eye involvement

Uveitis is under recognised, occuring in up to 40% of VZO patients, mostly 11 days after rash onset (but range 0-200 days!). It usually manifests with circumcorneal injection, photophobia, ache and sometimes decreased vision.

Corneal involvement in the form of punctuate erosions, ulceration, melting, numular or disciform keratitis and anaesthesia is common. Slit lamp or ophthalmoscope examination with corneal staining is essential.

Other ophthalmic complications include acute or chronic conjunctivitis, dry eye, trichiasis, episcleritis, scleritis, oculomotor cranial nerve palsies as well as sight-threatening retinal vasculitis, retinal necrosis and optic neuritis. A lifetime of ophthalmic follow-up may ensue.

Antiviral treatment

PBS listing limits funding of expensive antivirals to the period within 72 hours of onset of the rash when maximum cost-effectiveness is expected. Nevertheless, level C evidence exists that antiviral therapy commenced well after the 72 hour cut-off, is beneficial in preventing and /or reducing ocular complications, information that has ironically come from prospective studies in countries where antiviral therapy is less readily available. Antiviral treatment given to prevent VZO is likely to save sight (and money). Chronic active intraocular varicella infection does occur and responds to oral antiviral treatment.

Treatment options include aciclovir (Acyclo-V™, Zovirax™, Zyclir™) 800mg 5x /day, valaciclovir (Valtrex™) 1000mg tds or famciclovir (Famvir™) 500mg tds for 10 days. Famvir™, a penciclovir prodrug has lower systemic toxicity. Cheaper generics make antivirals a viable option for patients ineligible for PBS access.

Hutchinson's sign

Key Points

- When varicella-zoster involves the ophthalmic division of the trigeminal nerve, oral antiviral treatment is recommended, even if delayed, to prevent ocular infection, whether or not eye involvement has become apparent.
- Uveitis is a common presentation of VZO and onset may be delayed.
- Refer if there are symptoms of ocular involvement or if Hutchinson's sign is present.
- Remind patients to present if ache, photophobia, circumcorneal redness or visual loss develop.

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