Herpes Zoster Ophthalmicus

What does an optometrist need to know?

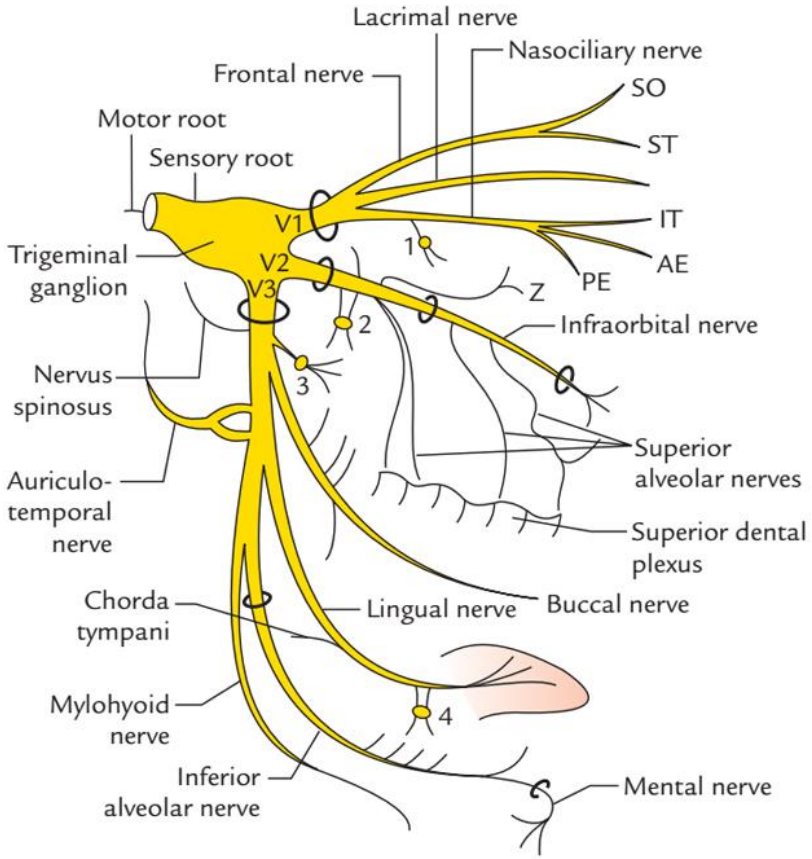
Diagnosis of HZO and immediate treatment

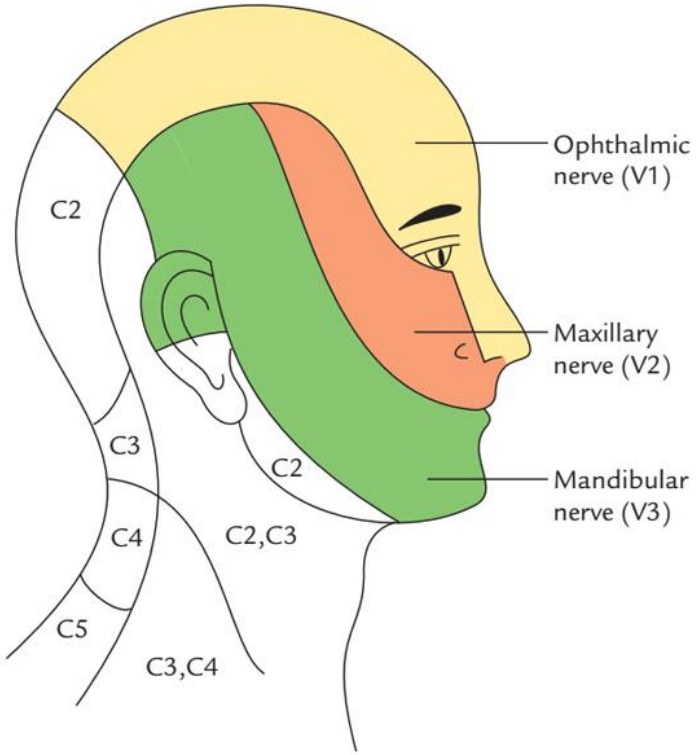
Management of long term complications of HZO

Where does shingles come from again?

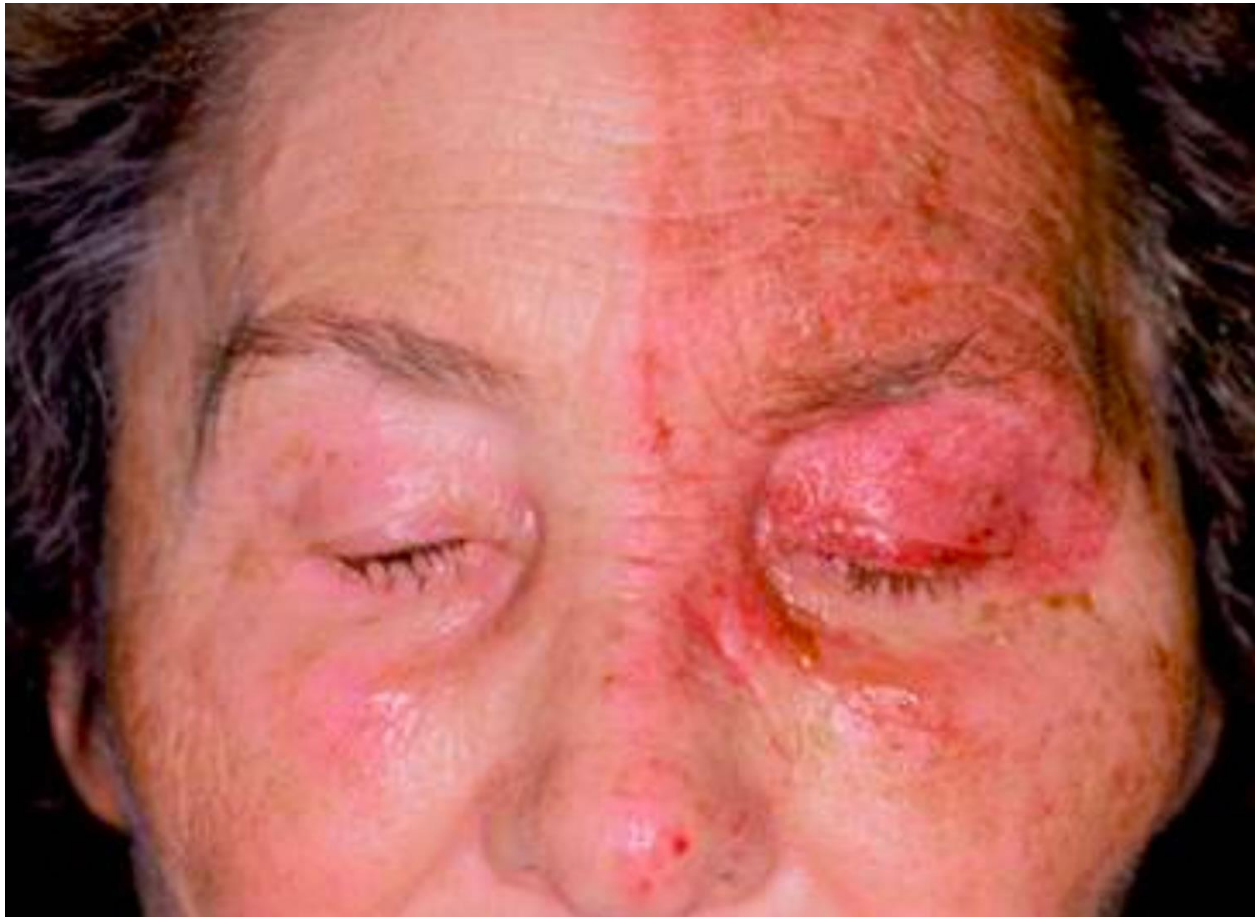
- Primary infection with VZV causes chicken pox
- 99.5% of US population over 40 have been infected
- CDC in the US reports almost 1 in 3 will suffer from reactivation of the virus as zoster infection in their lifetime
- Zoster means “girdle or belt” from the common distribution
- Ophthalmic division of trigeminal nerve involved in 7-17% of Herpes Zoster cases and clinically defined as HZO

Trigeminal nerve review

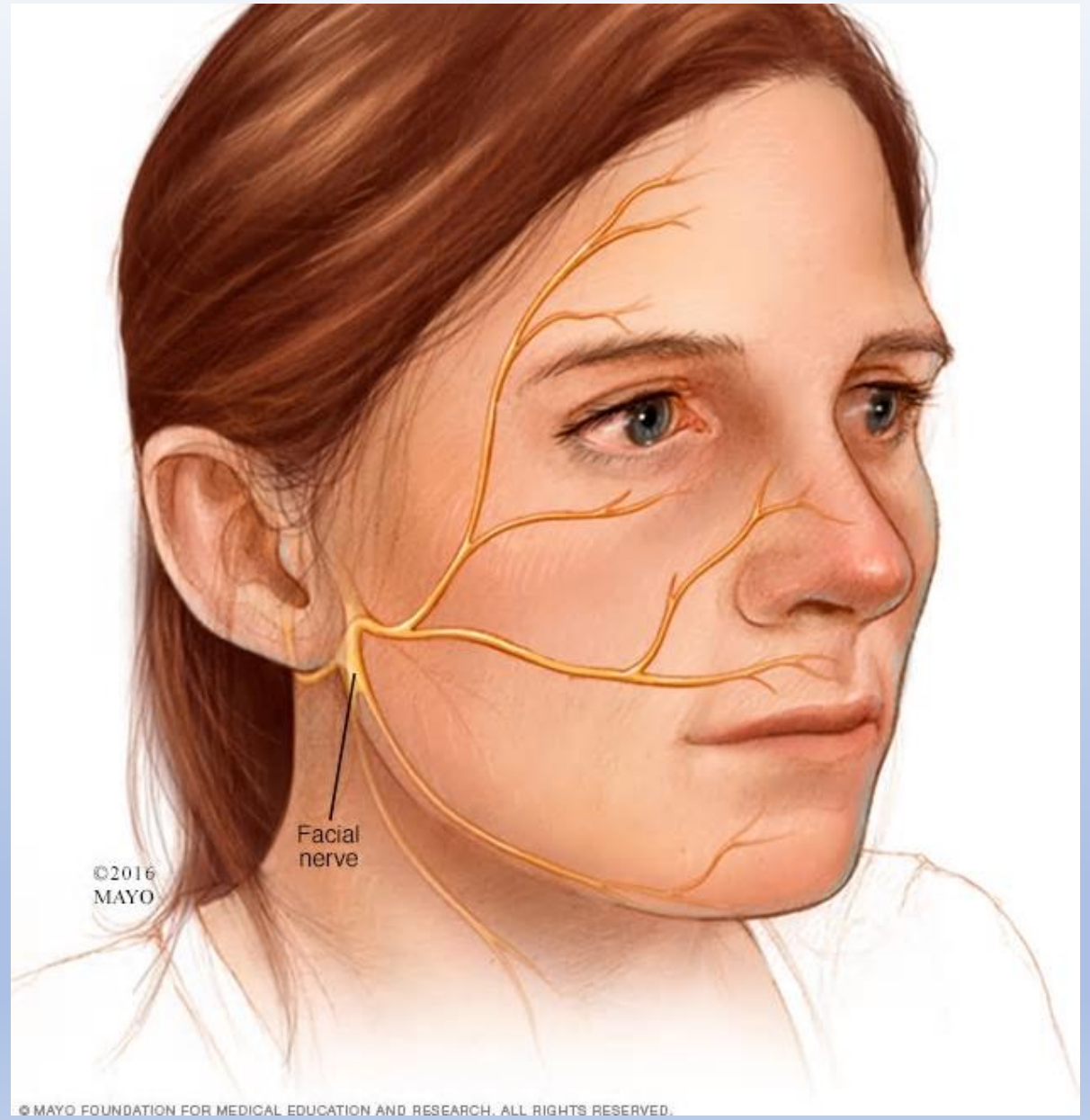




Ophthalmic division of the trigeminal nerve



Facial nerve and Ramsay Hunt Syndrome

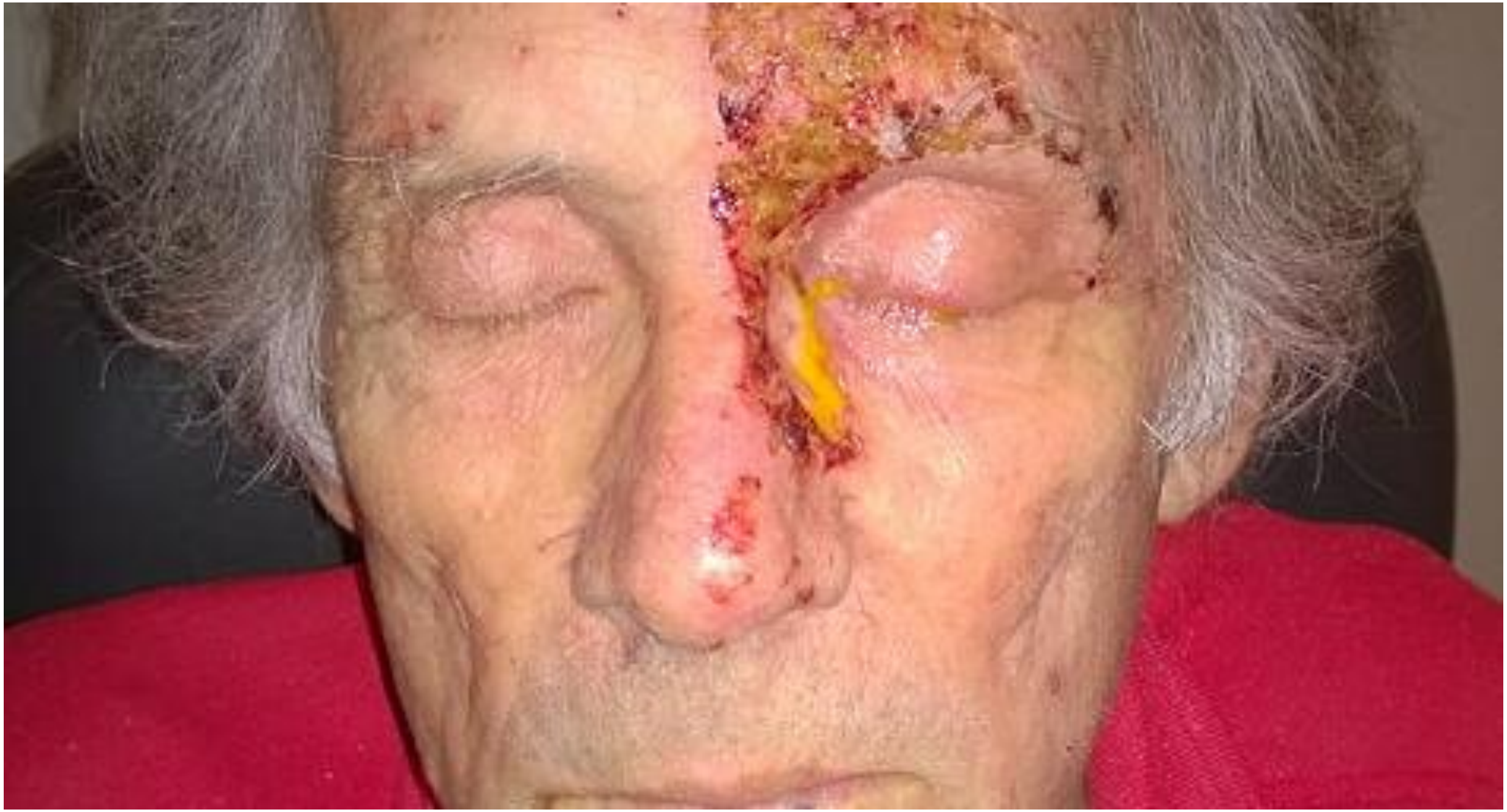


All patients with HZO need antiviral treatment

- Traditionally Oral aciclovir 800mg 5 times daily
- Current Australian guidelines
  - famciclovir 250 mg 3 times daily for seven days, or
  - valaciclovir 1 g 3 times daily for seven days
  - greater bioavailability and less frequent dosing in comparison to aciclovir
- Intravenous aciclovir (10 mg/kg three times a day) is usually reserved for immunocompromised patients with disseminated disease and severe HZO
- Severity and duration of the illness is reduced if treated with 72 hours of rash

How does HZO present?

- Typical case in Echuca or any aging regional town
  - 70+ year old
  - Shingles rash on the forehead and on course of anti-viral drugs
  - GP sends to us to rule out ocular involvement, ie
    - Lid swelling
    - Episcleritis and Scleritis
    - Corneal disease from SPK to deep stromal keratitis and neurotrophic disease
    - Uveitis, can occur from two weeks to years after the rash
    - Acute retinal necrosis and progressive outer retinal necrosis (AIDS)
    - Optic neuritis
    - Oculomotor palsies



Case one Not so typical

- 28/11/2011 36 yo female
- HA started 10 days ago, getting worse each day. Some relief at night, sleeps ok. Sharp pain behind right temple yesterday. Noticed right top eye lid swollen
- SL exam- right top lid generalised swelling. Right superior diffuse episcleritis. superior limbus NaFl pooling, no staining. Left NAD.
- Flarex discussed for episcleritis. Hold treatment until GP appt this afternoon. Recommend aciclovir tablets as distribution of itch included forehead, scalp and others.

Case one Not so typical

- 30/11/2011 taking Famciclovir
- skin lesions right forehead, top lid red and swollen. Pain is getting too much. nurofen not helping as much now
- Right sup episcleritis, NaFl pooling at conj/limbus sup junction
- Volk right and left optic discs normal in appearance, no sign of inflammation
- Seeing GP in 10 mins for pain relief and possible blood tests

Case one Not so typical

- 2/12/2011
- needing less pain killers today. right top lid is noticeably less swollen.
- Right sup episcleritis, NaFl pooling at conj/limbus sup junction, still 6/6 right.
- 12/12/2011 Finished Famciclovir
- Still taking Nurofen and Panadeine extra for forehead/temple pain right. Tingling again
- right top lid still bit swollen, right sup limbus "swelling" without deep redness of prev episcleritis

Is there such a thing as a good HZO?

- Younger patient
- Not immunocompromised
- Treated with oral antivirals within 72 hours of rash
- Ocular involvement limited to lids and episcleritis
- Post Herpetic Neuralgia (PHN) limited to a thankfully short duration

Back to Ramsay Hunt Syndrome

- Ramsay Hunt syndrome (herpes zoster oticus) occurs when a shingles outbreak affects the facial nerve.
- Painful shingles rash and subsequent PHN
- can cause facial paralysis and hearing loss in the affected ear.
- Optoms get referrals because of risk to cornea from incomplete lid closure
- Monitor for corneal exposure keratitis and manage.
- May have to refer for surgical options in worst case scenario

Case two Will it ever end?

- 25/06/2016
  - 45 year old female
  - Referred by GP issue with inflammation in LE for last 1 month (since 8 May). Started with blind pimple. Was thought to be shingles initially. Referred to Dr X ophthalmologist. Not particularly happy with experience. Treated with 2 courses of antibiotics (oral) - responds quite well but flares up when ceased - Cephalexin 500mg x2. Local GP prescribed Chlorsig yesterday.
  - Dr X ruled out Shingles…….

Case two Will it ever end?

- Colleague who assessed her found
- VH 0.1 (NARROW), Lids L significant hyperaemia and oedema, Conj - sig hyperaemia LE - esp limbal, Corneal - significant central haze and some KP
- IOP 16 and 40 unaided 6/6 6/19
- Prescribe Pred Forte q2h, Cosopt BID
- Review 2 days

Case two Will it ever end?

- Eye is not as red but still blurred but not as blurred as it was. Still glare sensitive. But not as painful.
- Corneal - mild central haze, residual KP, Lens - NAD
- NaFl: No dendrites. Mild epithelial irregularity.
- IOP 15 and 22 unaided 6/6 6/15

Case two Will it ever end?

- 9 days of Pred Forte and Cosopt later
- Review. Eye feeling much better. Blur settled basically and only occas glare sensitive. Swelling from lids almost entirely resolved.
- Residual central KP and mild corneal haze
- Reduced lid oedema
- IOP 12/12 unaided 6/6 6/9
- Eye responding well but needs to maintain Pred Forte.
- Cease Cosopt Friday

Case two Flarex period

- 23/1/2017 many visits later and now on Flarex only
- Having a fair bit of trouble with blurriness. Improves with Flarex but having to use basically every day.
- IOP 16/17 unaided 6/6 6/9=
- Increase Flarex to TID for a couple of weeks then BID for 2 weeks.
- Rev 1 month.

Case two Will it ever end?

- Feb 2017
- Finds Flarex is not working as well as Pred. After a couple of hours vision is blurred again.
- Using Flarex 2x/day at present.
- IOP 17/18 unaided 6/6 6/9=
- Restart Pred bid

Case two Will it ever end?

- 16/03/2017
- Px had 14 consultations with my colleague and is not coping with ongoing need for steroids to control corneal haze and inflammation
- Seeks a 2nd opinion within the same practice
- SL VH open, right normal, left central corneal haze, some endo changes, a single pigmented KP in pupil zone, no cells in AC, no signs of sectoral iris atrophy which is common in Herpetic uveitis.
- IOP 14/15 unaided 6/6 6/12
- Refer to corneal specialist Dr Y

Case two Will it ever end?

- 25/05/17
- Dr Y in April confirmed long recovery from HZO will mean slow taper of Pred. Currently on tid Pred.
- SL left corneal haze, NaFl negative and positive stain, ie raised ridges in epithelium. No KP today
- PH 6/9= left
- Keep Pred tid as Dr Y suggested review 3 weeks

Case two Will it ever end?

- 22/06/17
- Had some days one this week and one last week that vision left hazy and needed 4 drops to see better.
- SL raised corneal epithelial staining (pseudodendrite)
- PH 6/19 left
- Rang Dr Y who wants her on oral valaciclovir suspected pseudodendrites. he will fax Rx to pharmacy, review one week

“Delayed herpes zoster pseudodendrites. Polymerase chain reaction detection of viral DNA and a role for antiviral therapy.”

Case two Will it ever end?

- 29/06/17
- feeling a bit better on antiviral tablets and Pred tid again.
- NaFl v faint neg stain, no sign of pseudodendrites now.
- Rev one week
- Report to Dr Y 6/9- with Rx

Case two Will it ever end?

- 07/07/17
- feeling a bit better on antiviral tablets and Pred bid recommended by Dr Y.
- SL left corneal haze NaFl no stain at all
- Pred bid left, VA best yet 6/7.5

Case two Maybe it will never end?

- Fast forward to 2019
- Now able to hold it with Pred twice a week and daily lubricants
- Dr Y has given valaciclovir prescription for half a tablet daily long term
- VA is 6/9 and she is happy
- Patient is now prepared for a long ,long recovery and will need ongoing review to monitor IOP and cataract development.

HZO diagnosis - What to look out for

Trigeminal nerve – ophthalmic division

- Lid swelling
- Episcleritis and Scleritis
- Corneal disease from SPK to deep stromal keratitis and neurotrophic disease
- Uveitis, can occur from two weeks to years after the rash
- Acute retinal necrosis and progressive outer retinal necrosis (AIDS)

If other cranial nerves are involved

- Optic neuritis
- Oculomotor palsies and Ramsay Hunt Syndrome

HZO treatment – What do they need

- Anti viral medication -every single case
- IOP control -uveitis
- Inflammation control -uveitis and disciform keratitis
- Long term lubrication -neurotrophic keratitis
- Referral -reassurance to retinitis