Neuro-ophthalmology: 5 Rules for the Road

Michael Forrest
Serial ledume, The Line cetty of Queendand to Chairmon. By Daya thrent, Mater Health Service

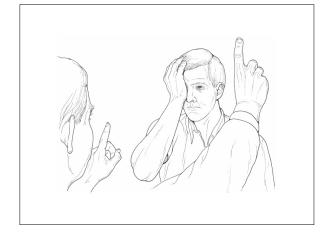
Northside
EVE SPECIALISTS

June 11, 2011 Shanggi-La Hotel, Cairns, north Queensland Vision

Rule #1: You can't find a fever if you don't take a temperature

- » Patients with blurred vision need:
  - Visual acuity measurement

  - Pupil examination ie "swinging flashlight test"
  - ≈ (Fundoscopy)



# $Horner's\ Syndrome$

- $_{\mbox{\tiny M}}$  anisocoria with miosis, ptosis ipsilateral to lesion
- ™ may also have
  - ⊭ anhydrosis
  - ь face or neck pain (suggests ICA dissection)
  - » heterochromia iridis (suggests congenital or very longstanding)
- ≈ causes include
  - ⊭ ICA dissection
  - $_{\times}$  brainstem stroke/tumour, cavernous sinus & apical lung tumours
- \* iatrogenic (neck/chest surgery, chiropractic neck manipulation)

# Rule #2: Suspect Giant Cell Arteritis

- ≈ in every patient over 50 with
  - ≈ transient loss of vision
  - ≈ sudden loss of vision
  - « acute/recent (whether transient or persistant) diplopia, even if eye movements look normal
- ≈ get an ESR and CRP on the way to their ophthalmologist

## GCA Symptoms

- » Ophthalmic
  - » transient loss of vision, preceding permanent visual loss
  - \* LOV is often rapidly, sequentially, bilateral
  - » transient or persistent diplopia
- » Systemic
  - w new recent onset headache
  - » jaw claudication, scalp tenderness
  - malaise, weight loss, night sweats, muscle aches
  - ⊭ ear pain, neck pain

# Giant Cell Arteritis: Investigation and Management

- ≈ Treatment:
  - Steroid: oral Prednisolone or IV Methylprednisolone followed by oral Prednisolone
  - $_{\mbox{\tiny MS}}$  osteoporosis and gastric ulcer prophylaxis
- » Anatomical pathology: Temporal Artery Biopsy
  - $_{\bowtie}$  Every patient with suspected Giant Cell requires TABx
  - st Every patient *treated* for Giant Cell deserves TABx

Rule #3: Acute/recent diplopia needs imaging and referral

### (and ESR & CRP if over 50 years old)

- \* Acute III Paresis is an aneurysm until proven otherwise
- \* Acquired IV Paresis could be tumour or vascular malformation, and needs MRI
- \* Acquired VI Paresis could be tumour, and needs MRI

# IV Paresis ★ Congenital ★ Trauma ★ Ischemia

# Rule #4: Eye problems can kill

- \* most urgent life-threatening emergencies:
  - ⊮ III paresis (aneurysm)
  - $_{\mbox{\tiny **}}$  bilateral disk swelling (tumour or dural sinus thrombosis)
  - \* acute ophthalmoplegia (pituitary apoplexy/acute myasthenia)
  - » ptosis or diplopia with dyspnea, dysphagia, systemic weakness
  - \* (and of course let's not forget Giant Cell Arteritis)

## Raised Intracranial Pressure

- ≈ Headache
  - ≈ constant
  - ≈ present on waking
- ≈ Disk swelling
- ™ VI paresis
- № Needs urgent MRI/MRV

# Pituitary Apoplexy

- \* sudden necrotic expansion of (pre-existing) pituitary adenoma
- » severe sudden-onset headache
- ≈ may be groggy
- ≈ eye signs
  - ≈ reduced vision (monocular or binocular)
  - $_{\mbox{\tiny $st $}}$  field defect can be central chiasmal, pre- or post-chiasmal
- ≈ needs urgent admission

Rule #5: Visual loss can be the presenting sign of generalised neurological illness

- » Optic neuritis
  - \* typically painful acute monocular vision loss
  - ≈ RAPD almost universal
  - $_{\bowtie}\,$  central loss with confrontation fields
  - ≈ fundus usually normal
  - $_{\bowtie}$  MRI for assessment of MS risk
  - ≈ Steroids speed recovery, short-term protection against MS

# Summary

- ≈ #1: Need to examine VA, Fields, Pupils, Disks

- $\approx$  #4: Eye emergencies CAN KILL
- \* #5: Eye complaints can presage systemic disease