

Acute visual loss

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| [emergency](#), [neurology](#), [onthepods](#), [ophthalmology](#)

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James talks to Dr Andrew Kaines about the approach to the management of patients presenting with acute visual loss.

Andrew Kaines is an expert in the diagnosis and treatment of diseases of the macula and retina.

After completing ophthalmology training, Andrew spent several years in sought-after international Medical Retina Fellowship positions at London's Moorfields Eye Hospital and the Jules Stein Institute, UCLA, California. It was during this time that Andrew honed his skills in the complexity of macula and retina disease, and also became involved in leading edge research into new treatments and diagnostic techniques for retinal diseases.

Since returning to Australia, he has been appointed to a Medical Retina VMO position at Sydney's Royal Prince Alfred Hospital, teaching registrar ophthalmologists in microincisional cataract surgery, retina and general ophthalmology. Andrew also practices privately in Hurstville and the Northern Beaches.

Acute Visual Loss

With Dr Andrew Kaines, Ophthalmology VMO at Royal Prince Alfred Hospital, New South Wales, Australia

Case - Sudden onset visual loss in an otherwise normal-looking (white) eye is a rare but concerning presentation. Dealing with this presentation is a matter of identifying vision-threatening conditions such as retinal detachment or giant cell arteritis and working up the patient with targeted history and examination.

1. General Approach:

- **Must not miss giant cell arteritis or retinal detachment: know the history and examination findings that are consistent with these presentations!**
- **Acute onset severe visual loss (<6/60) → call the eye registrar**
- **Note: acute visual loss in a 'red' eye is different differential diagnosis list → consider angle closure glaucoma, uveitis, conjunctivitis, corneal ulceration**

2. Features on History:

- Facial swelling
- Pre-auricular lymph nodes (often swollen in infective process)
- Pattern of redness
- Unilateral (ocular cause) vs bilateral (brain cause)
- Time of onset of symptoms (24-48hrs is typical)
- Age of patient
 - Young: optic neuritis, migraine
 - Old: giant cell arteritis, vascular occlusion (artery or vein occlusion), age-related macular degeneration
- Remission of symptoms
 - Spontaneous recovery: giant cell arteritis, embolus, migraine
 - No recovery: retinal detachment, vascular, age-related macular degeneration
- Associated symptoms
 - Jaw claudication, headache, tender to light touch → giant cell arteritis
 - Flashes and floaters (photopsias) → retinal detachment
 - Again, a painful red eye with acute visual loss = a different differential diagnosis list
- Past medical history (gives a hint of likely diagnosis)
 - Vascular risk factors → retinal vein or artery occlusion,
 - Trauma → commotio retinae, vitreous haemorrhage
 - Diabetes → vitreous haemorrhage
 - Multiple sclerosis → optic neuritis
 - Macular degeneration → progression from dry to wet macular degeneration
 - Personal history of cancer → metastatic disease (uncommon)

3. Assessing the patient with acute visual loss:

- Visual acuity - critical to any eye exam!
 - Examine both right eye and left eye individually
 - Both unaided and with help of pinhole (pinhole provides refractive correction)
 - Approach to the diabetic/ischaemic foot Use Snellen chart and record VA of each eye
 - If worse than 6/60, record as one of: CF (count fingers), HM (hand movements), LP (light perception) - write at what distance the patient can perceive
- Pupil assessment

- Size, shape, reactivity
- Assess for relative afferent pupillary defect (RAPD)
- Note that dilating the pupil pharmacologically prevents useful pupil assessment
- Fundoscopy
 - Dilate eye with tropicamide or phenylephrine or both
 - Haemorrhagic changes in 1 quadrant → branch retinal vein occlusion
 - Haemorrhagic change in 4 quadrants → central retinal vein occlusion
 - Macular haemorrhage and yellow drusen → wet macular degeneration
 - Cherry red macular spot → retinal artery occlusion

4. Investigation and management:

- Any patient suspicious for giant cell arteritis should have CRP, ESR, and FBC
- Concerning presentations (e.g. giant cell arteritis, optic neuritis, retinal detachment, central retinal artery occlusion,) should have the appropriate team contacted immediately
- Management will primarily be guided by the ophthalmology registrar or consultant
- Again, any acute onset severe visual loss (<6/60) → call eye registrar

Resource

- Eye Emergency Manual - An Illustrated Guide

Related Podcasts

- [Red eye](#)

Tags: #Acute Visual Loss, #ophthalmology

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