Macular Degeneration

Disclaimer

COVID-19 note

The Royal Australian and New Zealand College of Ophthalmologists (RANZCO) and The Royal Australian College of General Practitioners (RACGP) have made recommendations regarding eye examination during the COVID-19 pandemic. See RANZCO – COVID-19: Practical Guidance for General Practitioners Performing Eye Examinations.

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Red Flags

• Sudden or rapidly progressing vision loss

Background – About Macular Degeneration

• Age-related macular degeneration (AMD) is a major cause of central vision loss in patients aged > 55 years.

• The atrophic dry type of AMD is more common, and can cause mild distortion and gaps in vision, but it changes only gradually over time.
  o There is no treatment for dry AMD.
  o 10% of patients with dry AMD will develop a wet AMD. Vascular proliferation underneath the retina will rapidly lead to permanent loss of central vision if not treated early.

• Wet AMD begins as lesions which usually develop quickly and progress to an untreatable fibrotic scar within weeks to months, usually reducing vision to < 6/60.
  o Wet AMD is now a treatable condition. Good visual outcomes are likely when treatment is initiated within 1 to 2 weeks.
  o Distorted vision (e.g., lines have kinks in them or patches of vision are missing) is caused by fluid leaking from the new vessel. This bleeding often causes sudden decline.

• AMD has a genetic link and can run in families.

• Ocular coherence tomography (OCT) is the gold standard investigation for diagnosing and monitoring wet AMD. This test will normally be requested by the optometrist or treating ophthalmologist.

Assessment

1. Take a history for symptoms and risk factors.

  Risk factors
  • Previous vision loss from age-related macular degeneration (AMD) in the other eye
  • Aged > 55 years
  • Family history of AMD
  • Cardiovascular disease
  • Smoking
  • Obesity
  • Diabetes, especially if control is poor
  • Known retinopathy

Symptoms
  • Recent distortion of vision e.g., straight lines bent, letters missing, size of objects
  • Notable decrease in central vision, difficulty seeing television or faces
  • Glare with bright lights
  • Scotoma – black spot in central vision
• Onset – may be acute or insidious

2. Perform examination:
   ➢ Test **visual acuity**.

   **Testing visual acuity**
   • Ask if the patient has distance glasses with them, and if either eye has had known poor vision e.g., a lazy eye.
   • Test distance vision in each eye, with distance glasses if worn, using a 3 or 4 metre chart.
   • Repeat with pinhole (over the top of glasses if worn).
   • If vision improves with a pinhole and no cataract is present, then the patient needs a review for a refractive problem (e.g., nearsightedness, farsightedness, astigmatism and presbyopia).
   • If testing near vision, test while patient is wearing reading glasses (if worn).

   ➢ Test for central macular distortion with [Amsler grid test](#) with each eye individually.

   ➢ Test visual fields.

   ➢ Examine relative afferent pupillary defect (RAPD). See [How to Examine RAPD](#) [video, 2 min, 29 sec].

   ➢ If competent, perform **fundus examination**. See American Academy of Ophthalmology – AMD Pictures and Videos: What Does Macular Degeneration Look Like?

   **Fundus examination**
   • Dim lights.
   • Ask patient to look to a high point on the wall, a picture, door, or window frame.
   • Look through ophthalmoscope at arm’s length to see red reflex, and follow this as you move towards the patient. When you are very close you’ll see the disc and retina.
   • If abnormal red reflex, consider cataracts, corneal infection or scar, or vitreous haemorrhage.
   • Look for drusen (yellow deposits in retina), macular scars (late finding), red patches (subretinal haemorrhage), and retinal depigmentation.

3. In younger patients, suspect more complex problems, e.g. unusual macular or inflammatory diseases as macular degeneration is uncommon under age 55 years.

**Management**

1. If sudden or rapidly progressing vision loss, arrange **immediate ophthalmology assessment**.

2. If age-related macular degeneration (AMD) is suspected, arrange prompt **optometry assessment** for eye and vision assessment.

3. If wet AMD is confirmed:
   • ensure prompt **urgent or routine ophthalmology assessment** has been arranged by the optometrist.
   • treatment is successful in 90% of cases with anti-vascular endothelial growth factor (VEGF) injections into the eye.
treatment should be started within 1 or 2 weeks of symptom onset or progression.

4. If dry AMD is confirmed, advise the patient to:
   • arrange an annual retinal examination by an optometrist.
   • self-monitor once a week for early changes of wet AMD by using an Amsler grid with each eye individually. Instruct them to seek immediate medical advice if changes are detected.

5. For untreatable low vision and legal blindness, consider Vision Australia assessment.

6. Provide information on the benefits of nutrition and supplements for macular degeneration and eye health.

7. Advise the patient to stop smoking, and address other cardiovascular risk factors.

8. Advise the patient of the implications for driving.

Referral

• If sudden or rapidly progressing vision loss, arrange immediate ophthalmology assessment.
• If AMD is suspected, arrange prompt optometry assessment for eye and vision assessment.
• If wet AMD is confirmed, arrange urgent or routine ophthalmology assessment if not already arranged by the optometrist. If the patient wishes to see a private ophthalmologist, this must be within one week.
• If dry AMD is confirmed, request an annual examination by an optometrist.
• For untreatable low vision and legal blindness, consider Vision Australia assessment.

Information

For health professionals

Further information
Vision Initiative – Eye Health Reference Card

For patients

• Guide Dogs – Age-related Macular Degeneration (AMD)
• Macular Disease Foundation Australia
• Royal Australian and New Zealand College of Ophthalmologists (RANZCO) – Age-related Macular Degeneration (AMD)
• Vision Australia
• Vision Initiative – Age-related Macular Degeneration
• Vision Loss – Common Eye Problems

Disclaimer

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