

# Age-related macular degeneration



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Age-Related Macular Degeneration (ARMD) is the commonest cause of "legal blindness" in Australia. It is increasingly treatable with more treatments set to become available over the next year or two. Delay in diagnosis and referral may easily worsen the extent of visual loss – so a complaint of central blurred or distorted vision in an elderly person should be taken seriously. However, even in experienced hands fluorescein angiography may be needed for adequate diagnosis.

## What is ARMD?

- ◆ It is a degenerative macular disease that deprives patients of central vision.
- ◆ Most cases of severe visual loss occur rapidly (within weeks or months) due to the sudden development of "Wet" ARMD. Although this occurs unpredictably and without warning, most patients (90%) usually have pre-existing "Dry" ARMD for which there may be no symptoms at all

## What are the biggest risk factors for ARMD?

- ◆ Genetic - high rate of ARMD amongst family members
- ◆ Age - risk increases with every passing year
- ◆ Smoking

## How do "Dry" and "Wet" ARMD differ?

### Dry ARMD

- ◆ Hallmarks on examination are drusen (deposits of metabolic waste material beneath the retina) and pigmentary changes in the retinal pigment epithelium (RPE).
- ◆ Constitutes 90% of all ARMD cases
- ◆ Visual loss is usually mild and rarely severe
- ◆ Slowly progressive over many years

### Wet ARMD

- ◆ The hallmark is a blood vessel growth (choroidal neovascularisation), causing bleeding, exudation and scarring that damages the macula and central vision
- ◆ Just 10% of ARMD cases but responsible for 95% of all severe visual loss

- ◆ Occurs without warning as a sudden complication of Dry ARMD
- ◆ If one eye develops Wet ARMD, 40% of second eyes will develop it within five years

## What are the main symptoms?

- ◆ Often no symptoms at all in the early stages
- ◆ Blurred central or paracentral vision
- ◆ Difficulty reading fine print
- ◆ Distorted vision ("metamorphopsia")
- ◆ Straight lines look curved, bent or wavy
- ◆ Patients can screen themselves for new symptoms with an Amsler grid

## What treatment for Dry ARMD?

- ◆ Quit smoking
- ◆ High dose anti-oxidant multivitamins with zinc (e.g. two MacuVision tablets per day) – a large study showed a 25% reduction in risk of sight loss
- ◆ Natural dietary sources of antioxidants and omega-three fatty acids
- ◆ Possibly other anti-oxidant tablets such as Lutein
- ◆ Undergo prompt Fluorescein Angiography if conversion to wet ARMD is suspected

## What treatments for wet ARMD?

### Standard Laser Treatment

#### (Laser Photocoagulation or 'Hot' Laser)

- ◆ Originally the only treatment, now only used for a small minority of cases

- ◆ Laser destroys the abnormal blood vessels but unavoidably burns and sacrifices the overlying retinal nerve cells thereby producing a permanent blind spot as a side effect
- ◆ 50% of treatments fail within weeks to a few years

### Photodynamic Therapy (PDT)

- ◆ Has become the number one treatment over the past 5 years – an IV drug infusion is followed by a special, retinal nerve-sparing laser treatment
- ◆ Retreatments may be required for up to a year or more because the blood vessel growth often reactivates
- ◆ Vision frequently declines despite treatment
- ◆ Sadly, many cases are not suited to treatment with PDT

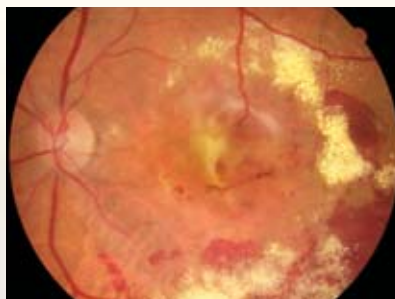
*Surgery* – has a very limited role in special circumstances

### Drug injections in the eye

- ◆ Injection of steroid into the vitreous cavity can sometimes boost the response of wet ARMD to photodynamic therapies
- ◆ Exciting, new drug injection treatments are about to emerge and be used increasingly over the next year or two
- ◆ These promising new treatments use drugs to block the hormones that drive growth and leakage from the abnormal blood vessels of "Wet" ARMD

*This clinical update is supported by the Eye Surgery Foundation.*

■ Advanced aged-related macular degeneration – preventable with early referral.



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