Age-Related Macular Degeneration (AMD)

Aging is universal. The macula is the most important part of the retina — much like the parliament of a country. It gives us sharpness, clarity of vision, and colour perception. With increasing longevity, age-related macular degeneration (AMD) has become a common eye disease. It causes blurring of central vision, reducing the sharpness, clarity, and brightness of what we see. Patients often mistake this for a problem with their spectacles or cataract, which delays diagnosis. AMD does not cause total blindness, but it makes reading, driving, and recognising faces difficult — hampering quality of life.

Types of AMD

Dry (Non-neovascular) AMD — Most common form (80–90%)

A slow degeneration process with gradual decline in vision.

In advanced stages, the patient cannot see what they want to see directly, but can see it — though blurred — by tilting the head or eye (central scotoma).

On retinal examination: pigmented spots in the macula, with faintly coloured yellowish spots called drusen.

Treatment: usually antioxidant tablets along with green leafy vegetables, cashew nuts, or pistachios.

An Amsler chart is normally given for home monitoring of macular health.

Wet (Neovascular) AMD — Less common (10–15%) but severe

Abnormal, leaky blood vessels (choroidal neovascular membrane, CNVM) grow under the retina, leading to fluid and blood exudation beneath and within the retina — causing rapid central vision loss.

Ultimately, this scars into fibrous tissue, causing permanent damage to visual acuity.

Symptoms of Wet AMD

- Blurred or fuzzy central vision.
- Straight lines looking bent, crooked, or wavy.
- Dark, blank, or blurry spots in the central field of vision.
- Reduced colour brightness.

Diagnosis

Diagnosis is done by examining the retina with slit lamp biomicroscopy, which reveals a dirty, greyish membrane with haemorrhage in the retina. OCT examination is the most important test — it shows fluid, blood, membrane, and retinal thickness, measuring all of these to help monitor progress and response to treatment. OCT Angiography is most frequently performed before starting treatment. Regular Fundus Fluorescein Angiography and ICG angiography are done in select cases.

Treatment

Anti-VEGF injections are usually the first line of treatment for wet age-related macular degeneration. They are given monthly — 1 injection for 2 to 3 months — then as and when required (PRN) with monthly follow-up, or on a Treat and Extend regime. In this regime, the interval between two injections is gradually increased from 4 weeks to 6 weeks, 8 weeks, and 12 weeks, with the aim of keeping the disease under control.

Anti-VEGF injections used include:

- Avastin, Zaltrap (off label)
- Accentrix, Razumab, Ocewa, Ranieyes (biosimilars)
- Eylea, Anyra (biosimilars)
- Vabysmo and Peganax injection

Risk Factors & Prevention

Know your risk

Age: Most common in adults over 50–55 years.

Smoking: Doubles the risk of developing AMD.

Genetics: A family history raises your risk.

Lifestyle: High blood pressure, poor diet, and being overweight contribute to risk.

Protect your vision

Regular comprehensive eye examinations.

Quit smoking.

Eat a healthy diet rich in leafy greens and antioxidants.