

MACULAR DEGENERATION

DESCRIPTION

Macular Degeneration is an eye disease you'll hear more about in the ageing population. This disease is also known as AMD (age-related macular degeneration) and is the major cause of blindness or vision loss in the elderly. In Australia, one in seven people over the age of 50 is affected by this disease and the incidence increases with age. Macular Degeneration occurs when part of the retina degenerates (the interior layer of the eye that collects and transmits light signals to the optic nerve, then to the brain for interpretation as vision). The macula is the central portion of the retina which is responsible for sharp central vision; it is the macula that allows us to see with high acuity. Those most likely to be at risk of developing AMD include people with a family history of the disease, those over the age of 75 and smokers.

There are two types of AMD: Dry (atrophic) or Wet (neovascular) form. The Dry form is caused by gradual breakdown of cells in the Macula that results in blurring of the central vision over time. Appearance of yellow white spots (called "drusen") in the outer retina is the key marker for the dry form, which is detectable by examination of the eye with an ophthalmoscope. The majority of people with AMD begin with the dry form which is much more common than the wet form. There are three stages of dry AMD (early, intermediate and advanced dry AMD). Patients with early stage AMD usually have small drusen or few medium sized drusen detectable in the retina but may not exhibit any symptoms or vision loss. Patients with intermediate stage AMD will have one or more large sized drusen or many medium sized drusen; many of these patients will experience blurriness in their central vision, making it difficult to read, identify faces and perform tasks that require fine vision. In the advanced stage of dry AMD, further breakdown of cells in the retina causes more loss of central vision. The blurred area becomes larger and severely impairs the patient's ability to read and recognize faces unless they are very close. The dry form accounts for approximately 90% of all cases of AMD.

The Wet form of AMD is caused by growth of small abnormal blood vessels (medically known as neo-vascularisation) within layers of the retina which eventually leaks fluid, proteins and blood. This ultimately leads to the formation of destructive scars in the macula; once scars are formed the damage to the macula is irreversible. Wet macular degeneration almost always develops in patients who have had the dry form. Approximately 10% of patients who develop AMD have the wet form. Wet AMD is more severe and progresses much more rapidly than the dry form. Early stage symptoms include visual distortion and development of blind spot in the field of vision which can rapidly lead to severe central vision loss.

TREATMENT

Currently, there is no specific treatment for dry AMD, however, supplementation with high dose vitamins and minerals conforming to the "AREDS formula" (zinc 80 mg, vitamin C 500 mg, vitamin E 400 IU, copper 2 mg per day) can significantly reduce the risk of progressing from intermediate stage AMD to advanced dry AMD and wet AMD.

For the wet form of AMD, there are a range of treatments aimed at reducing the symptoms and improving the quality of life for patients. These include (1) injections of "angiogenesis inhibitors"

into the vitreous portions of the eye (the clear, jelly-like substance that fills the eye) in order to block vascular endothelial growth factor, a protein that promote abnormal blood vessel growth, (2) high energy lasers to heat, seal and destroy abnormal leaky blood vessels, and (3) Photodynamic therapy which involves intravenous administration of a light sensitive drug that is absorbed by abnormal blood vessels of the macula; a low intensity “cold” laser directed at the retina activates the drug which eventually destroys the abnormal blood vessels and inhibits the neo-vascularization.

PROGNOSIS

AMD is a complex disease which behaves differently in different people. Dry AMD progresses slowly, and most patients maintain useful vision throughout life. However, in some patients, dry AMD can progress to the more severe wet form of the disease which may cause rapid vision loss. There is no accurate way to predict who will develop the wet form of the disease. Advanced AMD can cause loss of all central vision in both eyes. However, patients with advance AMD will still retain peripheral or side vision and thus, are able to see enough to care for themselves and perform most of the daily living activities.

FURTHER INFORMATION & SUPPORT

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