

Medicine for Managers

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Macular Degeneration

Light entering the eye passes through front of the eye and then through the lens and is focused on the retina. The retina contains layers of cells called photoreceptors that are sensitive to light. The macula, the size of a pinhead, is the part of the retina that is associated with central vision and is composed of specialised cone cells that allow people to see fine detail and colour.

Macular Degeneration, the most common type of which is Age-related Macular Degeneration (AMD), is gradually progressive and usually presents initially as an increasing difficulty in seeing detail. Small print may be difficult to read, straight lines may appear wavy and the affected area may be irregularly blurred. A patient recently described it to me as appearing like a coffee splash on the centre of a page. Any person struggling to see detail should see an optician for an eye examination. It is thought to affect 2.4% of adults over age 50, 4.8% aged over 65 and 12.2% aged over 80 so that by the year 2020 there will be around 700,000 people with AMD. AMD accounts for more than half the patients registered blind in the UK.

Much useful information and support is available from the Macular Society
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The cause of AMD is not known but there are factors that increase the risk of developing the condition. There is increasing incidence with age and most people are over the age of sixty-five. It is more common in women and there is an inherited link making it more common in relatives within the same family. Smoking considerably increases the risk of AMD and, probably, so does sunlight. Vitamin A has long been held to be important in protecting from AMD although more recently Vitamin C and some trace elements have also been suggested as reducing the risk of acquisition of the disorder.

There is no cure for either form of AMD so the key is to make people aware of the

symptoms to look out for so that any changes are spotted and treated early if possible. People should be advised to stop smoking, maintain a healthy weight and eat a good balanced diet with plenty of coloured fruit and vegetables. They should also be aware of what normal vision is for them in each eye separately so that they can notice changes early. They can do this by covering each eye in turn and looking at something that has straight lines in it, such as a door or window frame or a Venetian blind. If they notice anything unusual including blurring or missing patches or any distortion in the lines they should see an optometrist as soon as possible to ensure all is well. Regular eye examinations are also an important tool in detecting the disease.

The definitive diagnosis of the disorder however and the type of degeneration is undertaken by an ophthalmologist. AMD is divided into two types, *wet* and *dry*. The terms refer to the changes which occur in the eye itself and are not associated with any symptoms. Both types normally affect both eyes though not necessarily at the same speed. The condition is not painful and neither results in total blindness.

Dry AMD is the more common and the result is a gradual deterioration in the central (detail) vision. It may take years to

progress and the late stage outcome is a blank area in the centre of the vision of both eyes. The peripheral vision (that part of the vision that you normally see out of the corner of your eye when looking straight ahead) is unaffected and so the patient never develops total blindness. There is currently no treatment for dry AMD.

Wet AMD progresses more quickly. In such cases the deterioration of the macula is associated with the growth of new blood vessels which leak fluid (hence the term 'wet') and cause damage and scarring to the macula. This may quickly lead to the loss of the central vision. It is possible to treat wet AMD to stop new blood vessels growing using anti-vascular endothelial growth factor (anti-VEGF). The injection, Lucentis, is injected directly into the anaesthetised eye under sterile conditions and there are normally few side effects. In most people the injection stops the eyesight from deteriorating further and between 30 and 50% of patients actually notice an improvement in vision.

Impairment of vision is very distressing but support and counselling are available and there are a huge number of visual aids which can assist. Simple techniques like improving lighting and using a magnifying glass may be helpful. Social Service and falls prevention teams' input may be important

for making the home safer and assisting with mobility when out and about. There are also many commercially available products that can make everyday tasks easier.

***I am most grateful for the review and modifications to this article by Stuart Holland (Public Affairs) and Dr Sue Blakeney (Clinical Adviser) at the College of Optometrists, 42 Craven Street, London WC2N 5NG.
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