

Oxford Radcliffe Hospitals **NHS**

NHS Trust

Oxford Eye Hospital

Anti angiogenesis agents for the treatment of Wet Age Related Macular Degeneration

Information for patients



Age related macular degeneration (AMD) usually occurs in people over 50 years of age. It is an eye condition characterised by damage to the central part of the retina (the macula), resulting in loss of central vision. In almost all people with AMD peripheral vision is not affected and useful peripheral vision is usually retained.

Initial symptoms of AMD are blurred or distorted central vision, which usually progresses to a blank or dark patch, making driving, reading, and detailed vision difficult or not possible. AMD can affect both eyes, and one may be affected before the other, leading to delayed diagnosis as the 'good' eye compensates for the affected eye and the problem is not noticed.

There are two main forms of AMD, which can be identified by an ophthalmologist:

Dry (non-exudative or non-neovascular) AMD

Dry AMD usually develops very slowly, often over years.

Wet (exudative or neovascular) AMD

The wet form accounts for about 10% of AMD cases and is characterised by the development of new blood vessels (angiogenesis) beneath the retina. This is caused by vascular endothelial growth factor (VEGF), a chemical signal produced by cells that stimulates the growth of new blood vessels. Bleeding from these vessels causes central visual loss and scarring. The process can progress rapidly within a few months, but the time scale varies between individuals and can be even faster.

Treatment of wet AMD

There has been a huge amount of interest and publicity surrounding the recent introduction of anti angiogenesis drugs, known as VEGF inhibitors, for the treatment of wet AMD. The VEGF inhibitors stop the new blood vessels from developing. The following VEGF inhibitor drugs have hit the headlines: Lucentis, Macugen and Avastin. Others are being developed.

The VEGF inhibitor treatments are suitable for patients with wet AMD if the lesion fulfils certain criteria, in particular if there is not too much pre-existing scarring (fibrosis). Other conditions, not just AMD but eye diseases with blood vessel growth at the back of the eye, may also be suitable for treatment with these agents.

Treatment with these drugs is by injection into the eye.

Lucentis (Ranibizumab)

Lucentis has been awarded a licence in Europe and the USA for the treatment of wet AMD. Lucentis is derived from bevacizumab (Avastin) using genetic engineering techniques. It is an antibody against human VEGF currently used for treatment of several solid organ tumours such as colorectal tumours.

Lucentis has been subject to a number of Phase 3 clinical trials – this means they are being trialled on large numbers of patients in many different clinical research centres. These studies show very encouraging results, and the company have now reported

approximately 90% stabilisation of AMD at 2 years. However the number of injections needed to achieve this is still not established.

Risks of intraocular injections

No particular eye or general health problems have been reported following the use of Lucentis/ Macugen apart from a slightly higher rate of vascular systemic events. These include stroke, heart attack, and transient ischaemic attack. However, any injection given into the eyeball (intraocular) carries the risk of serious complications, such as infection in the eye, traumatic cataract, retinal detachment (less than 2 events per 1000 injections), bleeding and the possibility of inflammation in response to the drug itself. The drug therefore must be delivered using sterile procedures by suitably trained and qualified clinicians.

Number of injections required

Clinical trials are underway and as yet there is no long-term data. For this reason there is no accurate way to estimate the point at which these injection treatments should be stopped. The natural history of AMD suggests the length of treatment may be up to 5 years. However, studies currently being carried out are looking at protocols with less frequent injections. There is also research looking at developing implants for slow release of intraocular drugs, and other drugs with a longer duration of action. Drug combination therapies are also being trialed.

Are you eligible for treatment?

The Oxfordshire PCT guidelines will support funding for treatment in people who have vision between 6/12 and 6/96, where progression of the condition has been demonstrated. There must be no central scarring and the affected area should be no larger than 12 times the optic nerve head area.

If the type of AMD that you have falls outside these criteria, then the VEGF inhibitors will not be funded on the NHS. In a few Trusts some patients have been treated as cases of 'special need', and funding has been made available on this basis. You will need to speak to your referring Ophthalmologist or GP about this.

If you would benefit from an anti-VEGF treatment (e.g. Lucentis or Avastin), but your eye does not fulfil the NICE guidelines and therefore funding is not available on the NHS, information regarding the option of private treatment can be given to you at the clinic appointment.

How is the treatment carried out?

After the first 3 injections spaced at 4-6 weekly intervals, the eye will be reassessed to check the need for further treatment. Both eyes are usually checked at each of these assessments. This assessment comprises measuring the level of vision, a colour photograph and an OCT. The images are reviewed by the medical team and the results will be communicated to you. You will usually require one of the following either:

- 1) A further injection
- 2) Continue with regular monitoring using OCTs and photographs
- 3) Further retinal investigations
- 4) A clinic appointment

You should receive this information within 1 week of the scan via a telephone call from the AMD coordinator. A letter is also sent out. If you have not received either a phone call or a letter within 10 days of the scan then you should telephone the AMD service (number at the bottom of the information sheet). Further treatment will only be recommended if the wet AMD appears active and if the AMD is responding adequately to treatment.

Clinical Trials in AMD

There are new drugs being investigated to treat AMD, and patients are being recruited for these trials. Information about these trials will be given to you at your appointment.

NICE Guidelines for Lucentis Treatment

For information on the NICE guidelines go to:

<http://guidance.nice.org.uk/TA155/PublicInfo/doc/English>

For further information please contact:

Victoria Hart

AMD Coordinator

Tel: (01865) 231080

Miss S Downes, MD, FRCOphth

Consultant Ophthalmic Surgeon

Tel: (01865) 234735

If you need an interpreter or need a document in another language, large print, Braille or audio version, please call **01865 221473** or email **PALSJR@orh.nhs.uk**

Miss S. Downes, Consultant Ophthalmic Surgeon
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Oxford Radcliffe Hospitals NHS Trust
Oxford OX3 9DU
www.oxfordradcliffe.nhs.uk