Ophthalmology Department

Wet Age Related Macular Degeneration (AMD) Treatments

What is "Wet" AMD ?

Wet AMD is caused by the development of tiny abnormal blood vessels, which grow behind the retina and often take the form of a "membrane". This membrane of abnormal blood vessels causes leakage of fluid into and behind the retina. It is quite common for this membrane to cause bleeding into and behind the retina. If the leakage and bleeding continue unabated the process ends with the formation of a thick fibrous scar covering either the whole macula or a large portion of it leading to very poor central vision. Although dry AMD is more common than wet AMD, nearly 90% of people who suffer severe vision loss do so because of wet AMD.

Types of Wet AMD

The dye angiography test(s) that you have undergone allow us to classify wet AMD itself into different types. There are two major types of wet AMD as indicated by angiography:

Classic
Occult

Classic membrane:

In this form the blood vessels are clearly seen in the early part of the angiogram. The total extent of the membrane is easily identified and it is usually obvious that the membrane is very “leaky”. In its purest form this classic membrane is seen in around 10-15% of wet AMD patients. This type of wet AMD is often characterised by very rapid progressive vision loss.

Occult membrane:

In this form of wet AMD the angiogram shows a poorly defined membrane, without identifiable blood vessels and a blurry margin making it difficult to tell how big the problems really is. These membranes are seen in around 85-90% of wet AMD patients. The vision loss in this form may occur more slowly but the eventual result is still likely to be very poor central vision in the affected eye.

It is quite common for these two types of wet AMD to co-exist in the same eye. In these situations we try to work out what portion of the entire lesion is classic versus occult.

Current Treatment Options

There are now three types of treatment for wet AMD:

- **Anti-vegf (anti-vascular endothelial growth factor) treatments**
- **Photodynamic therapy with Visudyne if ‘polyps’ (IPCV - Idiopathic Polypoidal Choroidal Vasculopathy) are present.**
- **Stereotactic Radiotherapy- as part of reseach trial.**

Photodynamic Therapy (PDT)

This therapy aims to destroy the membrane without causing damage to the surrounding normal retinal tissue. It does this by using a light-sensitive chemical dye, called VISUDYNE. This dye has a special affinity to the abnormal blood vessels that form the membrane in wet AMD. Photodynamic therapy thus allows us to target these vessels with minimal injury to normal retinal vessels.

The dye is given as an injection into the bloodstream. After a specific length of time a low powered laser beam is used to “activate” the dye. This process leads to chemical reactions inside the membrane causing them to “close up” by blood clotting. In theory this should be a perfect treatment, in practice however what we normally see is early success in most cases but very often the blood vessels in the membrane recover and around three months later recurrence of the membrane is usually the norm. PDT treatment is therefore repeated up to 3 times in the first year and 1 or 2 times in the second year of follow up and may even be required once or twice in the third year.

The ultimate aim of PDT is to help ensure stabilisation of vision and reduce the number of injections required in a 12 month period. It is unusual to see significant vision improvement even in cases deemed to have had a positive response.

The drug used in PDT, Visudyne, causes sensitivity to light and patients are advised to stay indoors and away from direct sunlight for 48 hours after treatment. Other side effects include reduced vision that is usually temporary lasting up to 14 days. There is also a risk of irreversible severe vision loss after PDT; this risk is quoted as between 1% - 4%

Anti-vegf treatments for wet AMD

Research evidence has indicated that a protein termed VEGF (vascular endothelial growth factor) has a very important role in wet AMD. This protein promotes the growth and development of abnormal blood vessels under the retina and also makes these vessels more 'leaky' than normal blood vessels. Drugs designed to block the action of the VEGF protein have been developed and can help with wet AMD.

Anti-vegf treatments and possible benefits, limitations and administration
There are currently a number of drugs available in the NHS for the treatment of wet AMD. Each drug works on a similar basis by inhibiting the growth of abnormal blood vessels that cause wet AMD. If your condition warrants these injections you will have a loading dose of 3 injections over 3 months.

Your condition will then be monitored and you will be given further injections as required.

The aim of the treatment is to prevent further vision loss. This is achieved in about 90% of patients. Although some patients (around 30%) have regained some vision, the treatment may not restore vision that has already been lost and may ultimately be unable to prevent further loss of vision caused by general macular disease progression over a longer time period.

Complications from the Medication and Injection

Complications of Anti-vegf therapies

There may be a small risk of Thrombosis leading to heart attack or stroke. It is important to remember that the age group who get wet AMD is the same age group in which these other problems most commonly occur, so a patient who has a heart attack or stroke after an injection may have had it without the injection.

Known risks of intravitreal eye injections

Your condition may not get better or may become worse. Any or all of the following complications may cause decreased vision and/or have a possibility of causing blindness. Additional procedures may be needed to treat these complications. During the follow up visits or phone calls you will be checked for possible side effects and the results will be discussed with you.
Possible complications of the procedure and administration of Anti-vegf therapies include but are not limited to retinal detachment, cataract formation (clouding of the lens of the eye), glaucoma (increased pressure in the eye), hypotony (reduced pressure in the eye), damage to the retina or cornea (structures of the eye), and bleeding. There is also the possibility of an eye infection (endophthalmitis). Any of these rare complications may lead to severe, permanent loss of vision. Side effects may include eye pain, subconjunctival haemorrhage (bloodshot eye), vitreous floaters, irregularity or swelling of the cornea, inflammation of the eye, and visual disturbances such as small specks in the vision. These are usually transient.

Patient Responsibilities

You should contact the ophthalmic department if any of the following signs of infection or other complications develop; pain, blurry or decreased vision, sensitivity to light, redness of the eye (compared to immediately after the injection), or discharge from the eye. You should not rub your eyes or swim for three days after each injection. You should keep all post-injection appointments or scheduled telephone call so that your doctor can check for complications.

In Case of Emergency please contact: 01484 355085

Ward 8C Calderdale Royal Hospital - Telephone 01422 223820

Further Information

www.nice.org.uk/page.aspx?o=86801
www.rnib.org.uk
www.nei.nih.gov/health
www.maculardisease.org
www.rcophth.ac.uk

If you have any comments about this leaflet or the service you have received you can contact :

Ophthalmology Department

Telephone: 01484 355085

www.cht.nhs.uk

If you would like this information in another format or language contact the above.

Potřebujete-li tyto informace v jiném formátu nebo jazyce, obraťte se prosím na výše uvedené oddělení

Jeżeli są Państwo zainteresowani otrzymaniem tych informacji w innym formacie lub wersji językowej, prosimy skontaktować się z nami, korzystając z ww. danych kontaktowych

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ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਉੱਪਰੋਕਤ ਵਿਭਾਗ ਵਿੱਚ ਸਾਡੇ ਨਾਲ ਸੰਪਰਕ ਕਰੋ।

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برائے مہربانی مندرجہ بالا شعبے میں ہم سے رابطہ کریں.

"إذا احتجت الحصول على هذه المعلومة بشكل مغاير أو مترجمة إلى لغة مختلفة فيرجى منك الاتصال بالقسم المذكور أعلاه"