

## Wet macular degeneration & your treatment options

### Lucentis, Avastin or Eyelea

Age-related macular degeneration (AMD) is the leading cause of blindness in people over 50 years of age. It is caused by the breakdown of the central portion of the retina (the nerve layer part of your eye that works like the film in a camera to pick up the picture) called the macula. The macula is responsible for the fine central vision that is needed for driving a car, reading fine print, recognizing faces, etc.

There are two types of macular degeneration: dry and wet.

In the 'wet' form of AMD, abnormal blood vessels grow in the back of the eye. Sometimes these vessels leak blood or fluid that causes blurred or distorted vision. This process is also known as choroidal neovascularization (CNV). Without treatment, vision loss may be quick and severe.

Anti VEGF agents work by blocking vascular endothelial growth factor (VEGF). Blocking or inhibiting VEGF helps prevent further growth of the abnormal blood vessels that cause leakage and damage in the eye.

The standard treatment for most forms of wet AMD is intravitreal injections (*injections into the eye*). A few forms of wet AMD will require special types of laser as well as intravitreal injections.

Lucentis and Eyelea treatments are approved by the National Institute of Health & Clinical Excellence (NICE). As per the NICE guidelines, all patients will not be eligible for treatment with Lucentis or Eyelea with NHS funding. For patients not meeting the NHS funding eligibility criteria, patients are often offered treatment with intravitreal Bevacizumab (Avastin).

#### Your choices are:

- Avastin (Bevacizumab)
- Lucentis (Ranibizumab)
- Eyelea (Aflibercept)

All 3 medicines are anti VEGF agents, which are delivered by an injection into the jelly of the eye.

#### Risk when anti VEGF agents are given to treat patients with eye conditions:

Most ophthalmologists believe that the risk of these complications for patients with eye conditions is low.

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Known risks are stroke, heart problems and high blood pressure amongst others.

#### Known risks of intravitreal eye injections:

- Infection inside the eye called endophthalmitis.
- Inflammation of the eye
- Retinal detachment
- Cataract formation (clouding of the lens of the eye)
- RPE rip ( inward curling of a layer of the retina)
- Glaucoma (increased pressure in the eye)
- Bleeding

Additional procedures may be needed to treat these complications.

Any of these rare complications may lead to severe, permanent loss of vision.

Patients receiving an injection may experience less severe side effects related to the procedure. These usually settle down in a day or two with the ointment or drops.

These side effects may include

- eye pain caused by scratched cornea ( corneal abrasion)
- subconjunctival haemorrhage (bloodshot eye)
- vitreous floaters or grey bubbles ( intravitreal air)
- irregularity / dryness the cornea (dry eye)

#### Lucentis treatment

Lucentis is licensed for the treatment of wet macular degeneration and is recommended by NICE. Currently it is the most commonly used drug for the treatment of wet macular degeneration.

#### Eyelea treatment

Eyelea is also licensed for the treatment of wet macular degeneration and is recommended by NICE. Eyelea is the latest drug to be approved for the treatment of wet macular degeneration. Studies suggest that less injections of Eyelea may be required for visual stabilisation compared to Lucentis over a year.

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#### **Avastin treatment and "Off Label" Status**

Avastin was not initially developed to treat your eye condition. Avastin is approved for the treatment of metastatic colorectal cancer. It does not have a licence for eye use.

Once a device or medication is approved by the regulatory authorities, physicians may use it 'off-label' for other purposes if they are well informed about the product, base its use on firm Scientific method and sound medical evidence, and maintain records of its use and effects. Ophthalmologists all over the world are also using Avastin 'off-label' to treat AMD and similar conditions.

Two large trials (CATT trial in the USA and IVAN trial in the UK) comparing Lucentis and Avastin shows fairly similar results in treatment of wet AMD.

Avastin is a significantly cheaper drug than Lucentis. There appears to be a slightly higher risk of infection, stroke or heart trouble with Avastin when compared with Lucentis. The risk appears to be low when both drugs are compared. However any number of coincidental life-threatening problems may occur that have no relationship to treatment drugs.

#### **Prospects with Anti VEGF treatment**

Approximately 80% of patients are likely to respond to Anti VEGF treatment and their vision may stabilize. Of these approximately 20% patients may find an improvement in their sight.

Around 20% of patients will not respond and their vision will deteriorate.

Some patients may just need 3 injections while others may need significantly more before the vision stabilises.

#### **Patient Responsibilities**

You should contact your Ophthalmologist if any of the following signs of infection or other complications develop such as pain, blurry or decreased vision, sensitivity to light, redness of the eye (compared to immediately after the injection), or discharge from the eye.

You are instructed not to

- rub your eyes
- swim
- use makeup around the eye
- gardening for five days after each injection

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You should attend-all your post-injection appointment schedules.

Although the likelihood of serious complications affecting other organs of your body is low, you should immediately contact your GP or visit A&E if you experience abdominal pain, chest pain, severe headache, slurred speech or weakness on one side of the body and you should notify these problems to your ophthalmologist.

If you would like to discuss your case, please contact your doctor on [contact@london-eye-surgeon.co.uk](mailto:contact@london-eye-surgeon.co.uk)

If you have had an injection and are concerned about a serious complication with redness, eye pain and decreased vision, please visit your closest eye casualty department. If you are in central London, please visit Moorfields eye hospital eye casualty.