



Irish College of  
Ophthalmologists  
*Eye Doctors of Ireland*  
*Protecting your Vision*

## Patient Information Leaflet

### Treatment of Wet Macular Degeneration with Intravitreal Injections of Anti-VEGF Drugs

**Name of Consultant:**

**Address:**

**Telephone:**

**Emergency contact details:**

#### Introduction

You have an eye condition called Wet Age-related Macular Degeneration **AMD**. Treatment for wet AMD is by an injection of medicine into the back of the eye **known as an intravitreal injection**. In order to undergo this treatment, you have to give consent and to sign the hospital consent form where appropriate. Before you sign the consent form, it is important that you fully understand the treatment you are about to have, including alternative treatments and any risks or side-effects.

#### What is Age-related Macular Degeneration?

Age-related Macular Degeneration **AMD** is an eye condition which is the leading cause of blindness in older people. There are two types of macular degeneration: dry and wet.

In the “dry” form of AMD, atrophy **or wearing out** of the fine cells in the macula **the centre of the retina** occurs. No treatment has as yet been proven to prevent or cure dry AMD, but research in this field continues. Currently, low vision aids may be used to support vision where necessary.

In the “wet” form of AMD, abnormal blood vessels grow under the macula and affect the centre of the vision. Often such vessels leak blood or fluid and cause blurred or distorted vision.

Without treatment, central vision loss may be severe, rapid and permanent.

### **How is AMD treated?**

Treatment of wet AMD cannot undo the changes already present in the eye, and the goal of treatment is therefore to prevent further loss of vision. Anti-VEGF drugs are given by injection into the eye and act to slow or stop growth of the abnormal blood vessels and leakage that cause AMD. Although some patients have regained vision, most patients’ vision will stabilise after treatment. Anti- VEGF injections may not restore vision that has already been lost, and does not always prevent further loss of vision caused by the disease.

### **How is the treatment given?**

Eye drops are administered to dilate the pupil and sterilise the eye. Once the pupil is dilated, the actual procedure takes around fifteen minutes. You will be brought to the procedure room, and asked to lie in a comfortable position on a trolley. The eye is numbed with anaesthetic drops and washed with Iodine. The eyelids are held open with an instrument called a speculum. The medication is injected into the vitreous humour, which is the jelly-like substance inside the back of the eye. You may experience slight discomfort, a feeling of pressure, or a sharp feeling on the eye at the time of injection.

Anti-VEGF injections are repeated into your eye once a month for at least three months, and later as needed at regular intervals. Your ophthalmologist **eye doctor** will tell you how often you will receive the injections and over what length of time. It is often necessary to attend for eye examinations and/or injections on a monthly basis and perhaps for several years.

### **What other treatment options are available?**

Other forms of treatment are available for some types of wet AMD. These include photodynamic therapy **PDT** using a “cold laser” and with a drug called Verteporfin **Visudyne** and, in some very limited cases, treatment with conventional or “hot laser”. Some other injections are sometimes used. These options can be explained to you by your eye doctor.

You do not have to receive treatment for your condition; however, without treatment your central vision may continue to worsen over a fairly short time period and to the point where treatment may no longer help. Although AMD rarely causes complete blindness, it can reduce the vision to the point where it is only possible to see outlines **known as peripheral vision** or movement, but no fine detail because of loss of central vision.

## **What are the risks of treatment?**

### **Risks of intravitreal eye injections**

All surgical procedures have an inherent risk; however the vast majority of patients will have no serious problem following the procedure. Serious complications of the intravitreal procedure include infection **endophthalmitis**, retinal detachment, cataract formation and vitreous haemorrhage. Any of these serious complications may lead to decreased vision and/or have a possibility of causing blindness, or even loss of the eye. In the clinical trials, these complications occurred at a rate of less than 0.1% of injections **1 in every 1,000 cases**. Other serious events, such as inflammation within the eye and increase pressure in the eye, occurred at a rate of less than 2% **less than 2 out of every 100** in the clinical trials. Additional procedures may be needed to treat these complications.

### **What to expect after an injection**

- After the injection, you may have a gritty feeling and the eye may look bloodshot for a few days.
- 25% of patients will experience a blood spot on the surface of the eye at the site of the injection. This will not alter your vision.
- You may see floaters, which will become smaller and will disappear over one to two weeks.
- 10% of patients may experience eye pain relating to the pre-injection preparation procedure **eyelid speculum, eye drops, eye wash**.
- 7% percent of patients will experience vitreous floaters or spots in the vision.
- Less than 10% will experience abrasion of the cornea, inflammation of the eye and visual disturbance.
- 8% of patients will experience a rise in intraocular pressure
- 7% of patients will develop a vitreous separation/vitreous detachment.

During follow up visits or telephone calls, you will be checked for possible side-effects, and the result will be discussed with you

### **Complications of anti-VEGF drugs in other body parts**

There is a theoretical increased risk of experiencing blood clots **such as may cause heart attack or stroke** after intravitreal administration of anti-VEGF drugs, which effect the growth of blood vessels. However, low incidence of these events were seen in the clinical trials. Patients with a history of stroke may be at greater risk than others for another stroke. If you have a history of stroke, please discuss this with your eye doctor. Low levels of anti-VEGF drugs can reach your blood stream after injection into the eye.

### **Coincidental risk**

Whenever a medication is used in a large cohort of patients, coincidental problems may occur that could have no relationship to the treatment. For example, patients with high blood pressure or smokers are already at increased risk for heart attacks and strokes. If a patient being treated with anti-VEGF drugs suffers a heart attack or stroke, it may be as a result of a patient's high blood pressure and/or smoking, and not necessarily due to the treatment.

Your condition may not get better, or may even become worse despite these injections. This treatment might not be effective for you.

### **Patient responsibilities**

Contact the emergency number you have been given or attend the eye accident and emergency department if you experience any major problems after an injection

Problems suggestive of an infection can include:

- Eye pain and inflammation **as against the normal discomfort after the procedure**
- Blurring or new decreased vision **as against after the procedure**
- Extreme light sensitivity
- Pus or other discharge coming from the eye

### **YOU can help prevent or reduce these problems:**

1. Do not rub your eye.
2. Do not go swimming for five days after each injection.

3. Wash your hands carefully before you apply the eye drops.
4. Avoid strenuous activity and lifting heavy objects.
5. Avoid getting soap or shampoo into your eye.
6. Avoid wearing eye make –up for up to one week.
7. Call your eye doctor **ophthalmologist** right away if you notice any of these problems.
8. Keep all follow up appointments.

If there are any signs of eye/eyelid infection present on the day of your planned injection, your treatment may need to be re-booked for another time to allow control of such infection.

Please inform your doctor if you have a sticky or discharging eye.

### **Irish College of Ophthalmologists**

The Irish College of Ophthalmologists (ICO) is the training and professional body for eye doctors in Ireland.

The ICO is dedicated to promoting and setting the highest standards of excellence and patient care in the practice of ophthalmology in Ireland. We do this by educating eye doctors in training, providing on-going education for eye doctors in practice, giving accurate medical advice to the public and policy guidance to the government.

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