

Intravitreal Anti-Vascular Endothelial Growth Factor Injection

Introduction

Anti-Vascular Endothelial Growth Factor (Anti-VEGF) works by inhibiting the growth of the abnormal blood vessels and reducing leakage of blood and fluid from abnormal blood vessels. In clinical trials, intravitreal anti-VEGF injections were proven to be effective in preventing further visual loss in patients with neovascular age-related macular degeneration, myopic choroidal neovascularization and macular oedema due to retinal vein occlusion and diabetic macular oedema. Ranibizumab (Lucentis®), Aflibercept (Eylea®) and Faricimab (Vabysmo®) were approved by the United States Food and Drug Administration (USFDA) for the treatment of exudative macular degeneration, myopic choroidal neovascularisation and macular oedema. Numerous studies carried out abroad proved it to be an effective and safe drug for the above conditions. According to studies, Lucentis®, Eylea® or Vabysmo® not only reduces the risk of further visual loss, but can also occasionally restore lost vision. When compared to conventional treatment options, Lucentis®, Eylea® or Vabysmo® showed a better outcome.

The Procedure

- Pupil will be dilated before the procedure.
- You will be lying on a bed or chair while anaesthetic and antibiotic drops will be instilled in your eye.
- The eye will then be cleaned with antiseptic solution. A small device called an eyelid speculum will be applied to keep your eyelids open while the doctor injects the drug into the eye (white of the eye) with a fine needle. You may feel slight pressure during the injection but most patients do not feel pain. The entire procedure takes around 5 to 10 minutes.

Risks

While you receive this treatment, you may have any, or none, of the side effects described below. Problems or side effects that are not yet known could also occur. Many side effects go away shortly after you discontinue therapy, but in some cases, side effects can be serious, long lasting, or permanent. Should any problem occurs, you will be given appropriate care for your condition, and you may be withdrawn from further treatment.

Common risks / Complications include:

- Subconjunctival haemorrhage (injection site)
- Eye pain
- Vitreous floaters or transient gas bubbles in the eye
- Increase in intraocular pressure

Uncommon Risks with Serious Consequences include:

- Lens trauma/cataract formation
- Endophthalmitis (intraocular infection)

- Retinal detachment
- Intraocular inflammation
- Intraocular hemorrhage
- Hypersensitivity

Any of these complications could lead to severe, permanent loss of vision and complete blindness

Systemic side effects may very rarely include increased risk of arterial thromboembolic events such as heart attack or stroke, which may lead to death.

Before the Procedure

- Your doctor will arrange a few investigations to be done prior to the injection. Depending on situation, this may include fundus fluorescein angiogram (FFA), optical coherence tomography (OCT), and fundus photography.
- Eyelids should be kept clean to avoid infection. Cosmetics and make-up should be avoided on the day of the surgery.
- Inform your doctor if you have systemic diseases such as hypertension, diabetes, ischaemic heart disease, stroke, or are currently taking antiplatelet drugs, anticoagulants, western or herbal medication.

After the Procedure

- Eye rubbing, swimming, and vigorous activities should be avoided for at least a week after the injection.
- If doctor prescribes you eye drops, it is important that you use the eye drops according to the instruction given by your doctor or nurse, or as stated on the eye drop bottle.

Follow Up

- The response to treatment varies individually. Results from studies showed that improvement in vision may only be apparent after a few injections. While some patients may see better after the injections, some may not have any significant improvement even with repeated treatment. Some patients do not respond to Lucentis®, Eylea® or Vabysmo® treatment and continue to have disease progression.
- Typically, multiple injections of Lucentis®, Eylea® or Vabysmo® are required. However, depending on situation, the frequency and number of injections would differ, and this should be determined together by you and your doctor.

Remarks

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. The actual risks may be different for different patients. During the procedure, unpredictable condition may arise, and additional procedures may be performed if necessary. For further information, please contact your doctor.