What is intravitreal injection of triamcinolone acetonide (ivTA)?

“Intravitreal” (iv) means the drug is injected inside the eyeball into the vitreous cavity (Figure 1). Triamcinolone acetonide (TA) is an intermediate acting steroid suspension (Figure 2).

Is this a new treatment?

- Triamcinolone has been around for a long time and has been used to inject into joints, muscles and around the eye to treat inflammation.

- Injecting it into the eyeball first started in human in 1996.

- Since then many scientific papers have been published on using intravitreal triamcinolone (ivTA) to treat various eye conditions, including DME, age-related macular degeneration and macular edema as a result of retinal vein occlusion.

- A German group first pioneered the use of intra-vitreal triamcinolone to treat diabetic macular edema in 2000

- To-date, in published papers alone over 1500 ivTA injections for various eye diseases have been performed

What are the advantages of having ivTA over conventional laser treatments for DME?

- The main aim of laser treatment is to prevent the vision from getting worse. Majority of patients do not have statistically significant visual gain 2 years after laser treatment

- Preliminary results have been encouraging. Although long-term results are not yet available, it is likely that ivTA injections will be better in terms of mid and long-term visual gain. Moreover, ivTa is effective in patients who have failed to respond to laser treatment
Fact Sheet_ 2

**How is ivTA given?**

- The injection is performed after anaesthetic eye drops. The procedure usually takes a few minutes.
- Patients can usually go home after the procedure.
- The eye is not covered but we do recommend that friends or relatives accompany the patient on the day of injection.
- ivTA can also be given at the end of cataract surgery for patients with both cataracts and DME.

**Is ivTA safe?**

- Any procedure is associated with risks. ivTA injection can potentially cause sight-threatening complications like severe infection. It may also cause eye tissue injury such as bleeding, retinal detachment and cataract formation etc. Steroid-induced cataract is also possible.
- In reality, from our own research, the common side effect is a transient increase in IOP, which occurs in 1 in 4 patients. If carefully controlled, this will not lead to glaucoma. And the IOP effect usually goes away after the drug is totally absorbed after a few months.
- Very few patients suffer a worsening of their vision after ivTA injection.
- The amount of drug injected is small and it is trapped inside the eyeball, therefore it is very unlikely to cause side effects to the rest of the body.
- Because the drug will be totally reabsorbed in a few months’ time, repeat injection is needed for most patients.

**Intravitreal triamcinolone for diabetic macular edema**

![Fundus Photography](image1)

![Fluorescein Angiography](image2)

![Ocular Coherent Tomography](image3)

**Before Intravitreal Steroid**

![Before Intravitreal Steroid](image4)

**After Intravitreal Steroid**

![After Intravitreal Steroid](image5)