

INTRAOCULAR TELESCOPES INFORMATION PACK

Please ensure that you are made aware of the contents of this information pack before proceeding to surgery.

**Brendan J Moriarty
Consultant Ophthalmic Surgeon
M.A. (Cantab), M.B., B. Chir.
F.R.C.S., F.R.C. Ophth., M.D.**

Introduction:

Age-related macular degeneration (ARMD) is the commonest cause for blindness in the over 50 year olds. 10% of these cases are caused by the wet type macular degeneration which is usually treated by injections into the eye (anti-VEGF injection). However, the remaining 90% of patients with dry ARMD have very limited treatment options. Patients are usually prescribed magnifiers, etc. but these are very frequently found troublesome and unhelpful. In the last few years a considerable amount of time has been devoted towards helping to improve the vision of patients with dry macular degeneration using intraocular telescope surgery. There has been a great deal of interest in the press with regard to stem cell work but at the present moment this is a study and not available to patients for treatment. Therefore, the only possible visual rehabilitation at the present time after a good low visual aid assessment is to consider the possibility of intraocular telescope surgery. I first performed such surgery in 2008 and am a special advisor to NICE with regard to this topic. NICE has assessed the uses of intraocular telescope surgery and I enclose the IPG272 document which delineates their assessments. I have been College advisor to NICE with regard to intraocular telescope surgery and was awarded the distinction of 'Best Original Work' by the American Academy of Ophthalmology. This information sheet is an attempt to guide you through some of the issues, which we will also discuss during a consultation.

What types of telescopes there are: There are a number of telescopes available and I will assess you with regard to the suitability of each of these when you have a consultation. These are as follows:

1. **The implantable miniature telescope/CentraSight system.** This is a high magnification, approximately x3 intraocular telescope which is implanted in one eye to improve the reading abilities. The other eye is usually kept for navigation and the operated eye is used for reading. This is undoubtedly the most extensively researched telescope and the last few years has been passed by the very stringent the FDA in America where it has been shown to improve the visual acuity in over 60% of patients by at least three lines, i.e. approximately double the reading abilities. At the time of surgery your natural lens will be removed (or an intraocular lens will be removed if you have previously had cataract surgery) and the lens implanted inside the eye. There is an extensive preoperative and postoperative training schedule to get the best possible outcomes with this lens, and it is undoubtedly the most expensive of the procedures available. This lens has CE and FDA approval.
2. **The IOL VIP.** This intraocular lens system works more by diverting the image away from the scarred area of the retina to an area which is not scarred. It affords very little magnification, but equally well in selected patients can provide significant visual improvement. Again, this lens can be used even if you have previously had cataract surgery. Its main drawback is that it may give unpredictable degrees of longsightedness which obviously will require spectacles and/or contact lenses postoperatively, but again this will be entered into discussion on our assessment. The lens has CE approval but has not been assessed by the FDA.
3. **Sharioth Macular Lens** This lens is designed to improve near vision in people with problems affecting the macula. It is not designed to restore perfect vision and a period of adaptation or training may be required as reading materials and near tasks may need to be held closer than before the lens is implanted. As the lens is quite new, there are no long-term follow up studies published as yet.

I have enclosed an older article I wrote some years ago describing the lenses. This article was written before the introduction of the LMI and therefore does not include a discussion of its merits.

What are the risks? As with any eye operation, there are risks specific to any eye operation and also risk specific to the implantation of an intraocular telescope. The risks of eye surgery are:

Potential Complications of Surgery

- Endophthalmitis (infection and inflammation developing with the eye after surgery)
- Haemorrhage (bleeding)
- Bullous keratopathy (corneal decompensation)
- Dislocation of the lens implant (implant not centred properly)
- Cystoid macular oedema (fluid in the retina)
- Retinal Detachment
- Breakage of the posterior capsule
- Leaking wound
- Post-surgery chronic inflammation, pain and discomfort, photophobia (glare)
- Droopy eyelid (ptosis) which is rare with modern surgery
- Unintended refractive error after surgery, which may be myopia, long-sight and/or astigmatism.
- Glaucoma
- No lens implant or not possible to safely implant a multifocal lens implant
- Double vision, ghost image
- Difficulty with any future retinal detachment surgery necessitating removal of the lens implant
- With a multifocal lens implant there may be glare and other optical effects
- Long-term – if macular degeneration or reduced function occurs then the reduced contrast of a multifocal lens implant may affect vision more than if a monofocal lens is in place.

When to use the drops:

Eye drops begin on the day of surgery. Do not wait until the next day to begin your drops. To get the level of the post-op medications up you should begin using the drops as detailed on the chart below. You do not need to use the drops during the night.

The chart shows the usual post-op regimen. Mr Moriarty may occasionally issue differing verbal instructions. If these instructions differ from the chart below, then details will be written here:-

First week post op:-

Time	Drops	Drops	Drops
	Tobradex 2 hourly	Yellow twice a day	Cyclopentolate 1% 4 times a day
08:00	*	*	*
10:00	*		
12:00	*		*
14:00	*		
16:00	*		*
18:00	*		
20:00	*	*	*
22:00	*		

Second week post-op:-

Time	Drops	Drops	Drops
	Tobradex 4 times a day	Yellow twice a day	Cyclopentolate 1% 4 times a day
08:00	*	*	*
10:00			
12:00	*		*
14:00			
16:00	*		*
18:00			
20:00	*	*	*
22:00			

Third week post-op:-

Time	Drops	Drops	Drops
	Tobradex 3 times a day	Yellow twice a day	Cyclopentolate 1% 3 times a day
08:00	*	*	*
10:00			
12:00			
14:00	*		*
16:00			
18:00			
20:00	*	*	*
22:00			

Fourth week post op:-

Time	Drops	Drops	Drops
	Tobradex 2 times a day	Yellow twice a day	Cyclopentolate 1% twice a day
08:00	*	*	*
10:00			
12:00			
14:00			
16:00			
18:00			
20:00	*	*	*
22:00			

THEN STOP ALL DROPS.

How to apply your eye drops:

Always wash your hands before applying eye drops, then following these simple steps; this method applies to dropper bottles or unit dose vials –
Tilt your head back and look at the ceiling
Gently pull down the lower eyelid until there is a small pocket
Do not allow the bottle or vial to touch your eye or other surface
Squeeze the upturned dropper bottle or vial to release a drop into your eye

For the first few hours it is normal to experience:

- Red pink eyes
- Watering
- Itching
- Gritty feeling, foreign body sensation
- Soft focus vision
- Slight swelling of the eyelids.

Review after surgery

You will be discharged home with a review appointment to return to the clinic approximately one week after surgery. At this appointment your post-op drops will also be reviewed.

Advice points:

- Do not rub your eyes and use the eye-shield when sleeping for the first week.
- You can move and bend immediately as normal.
- Avoid bright sunlight without sunglasses immediately after surgery
- Avoid eye-drops other than those prescribed for one month.
- Avoid dusty/smoky environments for the first two weeks. If you do get dust, dirt or an eyelash in your eye, washout with any of your eye drops **DO NOT RUB YOUR EYES.**

- Make sure the drops are going in to the eye. If the drops rolls down your face then put some more in.
- Washing of the face the day following surgery is good. It is best to keep clean and avoid having crusting of the eyelashes. A normal shower, bath and careful washing of the face is good. Avoid washing immediately after surgery until the next day.

The weeks after surgery: Dry eyes

Many people experience some degree of dry eye in the early period after surgery and it is helpful to use artificial tear drops. These can be obtained over the counter at a Pharmacy or online from websites such as ww.dry-eyes.co.uk. Recommended artificial tear drops after surgery are:

Clinitas Sooth 0.4% (preservative free multi use minims)

Hyabak™ (preservative free, bottle lasts up to 60 days)

Refresh™ (preservative free) watery, relatively short acting

Contact numbers:

For clinical advice regarding aftercare please contact the nursing staff at Optegra Manchester Eye Hospital. For follow-up appointments (confirmation and/or cancellation) please contact Deryn Fawcett, Practice Manager at Optegra Prospect Eye Clinic.

Mr Brendan Moriarty	0771 653161
Miss Deryn Fawcett	0161 927 3177
Optegra Manchester Eye Hospital	0161 240 0700