Gleneagles Hospital
HONG KONG
港怡醫院

Hosp No.	:	HKID No.:	
Case No.	:		
Name	:		
DOB	:	M / F	
Adm Date	:		
Contact No.	:		

Procedure Information Sheet – Vitrectomy

1. Introduction

1.1. The vitreous is normally a clear, transparent jelly-like fluid that fills the inside of the eye in front of the retina. Vitrectomy is a microsurgical procedure to remove the vitreous in the central cavity of the eye and replace it with vitreous substitutes like special saline solution, gas or silicone oil.

1.2. Vitrectomy is used to treat various kinds of vitreo-retinal disorders including:

- 1.2.1. Vitreous haemorrhage or inflammation.
- 1.2.2. Retinal detachment.
- 1.2.3. Proliferative diabetic retinopathy.
- 1.2.4. Macular hole or vitreo-macular traction.
- 1.2.5. Epiretinal membrane.
- 1.2.6. Intraocular infections.
- 1.2.7. Retained lens material or dislocated lens implants following cataract surgery.
- 1.2.8. Intraocular foreign body.
- 1.2.9. Traumatic eye injuries.

2. Procedural Preparation

2.1. Written consent for operation and anaesthesia are required.

2.2. Fasting for 6- 8 hours before the operation is required if necessary.

2.3. Stop taking oral anticoagulant medication such as Aspirin or warfarin according to doctor's prescription.

2.4. Blood tests, chest x-ray etc. are usually required to prepare for general anaesthesia.

3. Procedure

3.1. The procedure can be performed under general or local anaesthesia.

3.2. The eyelid will be held opened using a special speculum. Three tiny incisions are then made in the sclera, the white of the eye, and connecting an infusion line to maintain constant eye pressure. Next, a light source and microscopic cutting device are inserted which will gently remove the vitreous fluid. Doctor will use a microscope to view the eye while performing the procedure. Tiny dissolvable stitches may be used to close the wound.

3.3. After the vitreous is removed, the doctor may perform any retinal surgery that is required and refill the eye with one of the following substitutes depending on your condition:

- 3.3.1. Saline solution that closely resembles the natural vitreous fluid in the eye
- 3.3.2. Intraocular gas to flatten and support the detached retina (this will absorb over 2-6 weeks)
- 3.3.3. Silicone oil (a second operation maybe required to remove it when the retina is stabilized)

3.4. Special silicone rubber or sponge may be used if scleral buckling procedures are performed for the repair of retinal detachment.

3.5. Laser or cryotherapy maybe applied during surgery to seal breaks in the retina. They may also be used for retinal ablation in advanced diabetic retinopathy.

3.6. The procedure usually takes 1-2 hours, but it may take longer in complicated conditions or when it is combined with other procedures such as scleral buckling or lens removal.

3.7. Antibiotic will be prescribed at the end of the procedure to prevent infection.

4. Recovery Phase

4.1. The operated eye will be swollen, red and sensitive. Tearing and gritty sensation may be experienced.

4.2. Vision may remain blurred during the early postoperative period especially when gas has been injected into the eye until the bubble gradually absorbs.

4.3. If gas or oil has been injected into the eye, you will be advised to maintain a special posture, for example, in a face-down or prone position as much as possible. This ensure the contact between the gas or oil and the affected retina, which encourage healing.

4.4. Since many vitreoretinal diseases are usually severe and potentially blinding in nature, full recovery of vision after operation may not be possible. Final visual outcome depends on the severity of the disease, the response of the eye and the occurrence of any significant complications.
4.5. Re-operation may be required if the disease process cannot be settled or if there are any significant complications.
4.6. Use anti-inflammatory and antibiotic drops as doctor prescribed.
4.7. Take analgesia as doctor prescribed to relieve pain.
4.8. Wear clothes with buttons rather than pullovers. Avoid contact between the clothes and the operated eye to prevent infection.
4.9. Leave some light on at night to avoid fall as you may not be accustomed to the eye-padding or blurred vision after surgery.

5. Possible Risks and Complications

5.1. Potential complications include:
- 5.1.1. Retinal tear or retinal detachment.
- 5.1.2. Infection.
- 5.1.3. Cataract formation or progression.
- 5.1.4. Bleeding inside the eye.
- 5.1.5. Increased pressure in eye or glaucoma.
- 5.1.6. Persistent lower pressure in eye.
- 5.1.7. Corneal edema or degeneration.
- 5.1.8. Refractive changes.
- 5.1.9. Retinal vascular occlusion.
- 5.1.10. Macula changes including epiretinal membrane or macula edema.
- 5.1.11. Anterior segment ischemia, exposure of explants and squint related to scleral buckling procedure.
- 5.1.12. Visual field loss.
- 5.1.13. Failure to attach the retina or retinal re-detachment requiring additional operations or treatment.
- 5.1.14. Recurrence of disease process.
- 5.1.15. Sympathetic ophthalmia.
- 5.1.16. Blindness.
- 5.1.17. Risks of anaesthesia.

6. Discharge Education

6.1. Follow the instruction to instill eye drops or apply eye ointment, and follow up as scheduled.
6.2. Maintain the special postoperative posture for 3 to 7 weeks after operation e.g. face down and prone position or as advised by the doctor.
6.3. Do not travel by air or go to high altitude when gas was injected inside the eyeball until it has been absorbed completely (as advised by doctor). The reduced atmospheric pressure causes the gas bubble to expand, which can raise the pressure in the eye to dangerous levels. Your vision will usually improve gradually when the eye is recovering well and the gas is being absorbed.
6.4. For the first 7 days following surgery, please wear plastic eye shield when sleeping.
6.5. Do not rub your eyes.
6.6. Avoid washing your hair for the first week to prevent infection.
6.7. Avoid swimming or doing vigorous activities.
6.8. If you need to perform any general anesthetic operation before the full absorption of the injected gases, please inform the attending anesthetist that a special gas had been injected inside your eyeball and need special precaution.

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6.9. If your vision worsens suddenly, fever and chills, deep headache or increasing eye redness, swelling, pain, or discharge, you should see your doctor immediately or seek medical attention at nearby accident and emergency department.

7. Remark

7.1. The above mentioned procedural information is not exhaustive, other unforeseen complications may occur in special patient groups or different individual. Please contact your physician for further enquiry.

8. References

8.1. Hospital Authority. Smart Patient Website.
8.2. Queen Elizabeth Hospital (2017). Vitrectomy Eye Surgery.
8.3. Birmingham NHS Foundation Trust Website.

I acknowledged the above information concerning the operation or procedure. I have also been given the opportunity to ask questions and received adequate explanations concerning the condition and treatment plan.

Patient/ Relative Signature: _____

Patient/ Relative Name: _____

Date: _____