

Introduction

The retina is the light-sensitive layer of tissue that lines the inside of the eye ball and sends visual image through the optic nerve to the brain. In most cases, retinal detachment is caused by break(s) in the retina which allow fluid to go underneath and separate the retina from the internal eye wall. Once the retina is detached, its blood supply is compromised, affecting visual perception. If left untreated, may lead to permanent visual loss.

The Operation / Procedure

The procedure, generally performed under general anaesthesia and sometimes under local or regional anaesthesia, aims to seal all the break(s) and re-attach the detached retina to its normal position. There are different procedures performed singly or in combination depending on circumstances.

1. Pneumatic Retinopexy

A gas bubble is injected into the eyeball to push the retina back to its normal position and close the break. You will be required to adopt a specific posture of your head in order to maximize the effect of the bubble for a period of time after the operation. Laser or cryotherapy would then be used to seal the break(s) in the retina

2. Scleral Buckling

Explants are placed on the outside of the eyeball to cause inward indentation of the eyeball whereby apposing the detached retina back to its normal position. Laser or cryotherapy would then be used to seal the break(s) in the retina. If necessary, vitrectomy, fluid drainage at the site of the detachment etc. will also be performed.

3. Vitrectomy

The vitreous gel is removed from the inside of the eye and replaced with special physiological saline solution. Gas bubble or silicone oil may be injected to push the retina back to its normal position. (see 1 above)

Preoperative Preparation

1. Admit 1 day before or on same day of this elective operation.
2. Anaesthetic assessment. **Inform your doctor** if you have other systemic diseases such as hypertension, stroke, heart disease, diabetes or on regular western medication (especially blood thinners like Aspirin or Warfarin), traditional Chinese medicine or health foods.
3. Keep fast for 6 to 8 hours before operation.
4. Empty bladder and change to operation clothes before transfer to operating room.
5. Pre-medication, intravenous line and antibiotic prophylaxis may be required.

Postoperative Instruction

A. General

1. Mild throat discomfort or pain because of intubation.
2. Mild discomfort or pain over the operation site. Inform nurse or doctor if pain severe.
3. Nausea or vomiting are common; inform nurses if symptoms severe.
4. Inform nurses if more analgesics are required.
5. Can mobilize and get out of bed 6 hours after operation, usually go home on day 2 after the operation.

B. Wound care

1. The operated site will be covered with eye pad and eye shield.
2. Do not rub your eyes.
3. You may need to maintain a special head posture for a period of time after the operation.
4. There may be some discomfort and tissue swelling after the operation.
5. Vision may remain blurred during the early postoperative period especially when gas has been injected into the eye during the operation or when the eye condition is not yet stable.
6. Leave some light on when you go to toilet at night to avoid falls as you may not be accustomed to the eye pad or blurring after surgery.
7. Wear clothes with buttons and not pullovers to avoid the clothes coming into contact with the operated eye to prevent infection.

C. Diet

Resume diet, usually 4 hours after anaesthesia, and when taking sips of water well.

Common Risks and complications (not all possible complications are listed)

A. Anesthesia related complications

1. Cardiovascular : myocardial infarction or ischaemia, stroke, deep vein thrombosis, pulmonary embolism.
2. Respiratory : atelectasis, pneumonia, asthmatic attack, exacerbation of chronic obstructive airway disease.
3. Allergic reaction and shock.
4. Toxicity of local anaesthetic may result in serious complication although rare.

B. Procedure related complications

The surgery is a major operation but is safe in general. However, the following risks and complications may occur:

Raised intra-ocular pressure	Failure to re-attach the retina even after multiple surgeries
Glaucoma	
Cataract	Re-detachment of retina
Anterior segment ischemia	Retinal fibrosis and scarring
Intraocular bleeding	Change in refractive status, increase in short-sightedness (myopia) after scleral buckling procedure
Infection - endophthalmitis	
Exposure of explant and extrusion that may require removal	Phthisis Bulbi
Squint and double vision	Risks of anaesthesia
Maculopathy - macular pucker	Visual loss or permanent blindness

Things to take note on discharge

1. Do not remove the patch until you are instructed by the doctor. See doctor as scheduled.
2. Avoid running water to come in contact with the eye until you have sought approval by your doctor. Avoid shampooing during the first week after operation to prevent infection to the operated eye.
3. No vigorous physical activity until allowed by your doctor.
4. When there is gas in the eye during the post-operative period:
 - a. Wear your bracelet and keep the gas card as long as possible till the total absorption of the gas.
 - b. Do not travel by air or travel to high altitude.
 - c. If you need any other surgical procedure(s) especially under general anaesthesia, you must inform the surgeon and anesthetist for special precaution and management.
 - d. Your vision will usually improve gradually when the eye is recovering well and the gas is being absorbed.
5. If your vision gets worse or experience signs of infection such as fever and chills, redness, swelling, increasing pain, excessive bleeding, or discharge from the procedure site, you should see your doctor immediately or seek medical attention at nearby Accident and Emergency Department.
6. Some people may achieve good vision after surgical repair. Some may achieve various degrees of working or navigational vision. The outcome depends on the extent, chronicity and the complexity of the retinal detachment, especially whether there is involvement of the macula, the response of the eye to the operation and the occurrence of any significant complications. If the retina detachment cannot be repaired, the vision will usually get worse and may become blind.

Remarks

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For further information please contact your doctor. Evangel Hospital reserves the right to amend this leaflet without prior notice. We welcome suggestions or enquiries on the information provided in this leaflet. Please contact our Healthcare professionals so that we could follow up and make improvement.

Reference:

Hospital Authority: "Retinal Re-attachment Surgery" (2016)

Smart Patient: http://www.ekg.org.hk/pilic/public/Ophthal_PILIC/Ophthal_RetinalReattachment_0073_eng.pdf (06-07-2023)