

Corneal Transplant

Introduction

Corneal transplant is a major eye operation where entire/part of the diseased cornea (the front part of the eye) is replaced with a healthy one from a donor.

It can be used for vision improvement, patching, therapeutic treatment or pain relief in a diseased eye.

The Procedure

- The procedure is usually done under general anaesthesia (in certain situations could be done under local anaesthesia).
- A special instrument is used to cut out the diseased part of the cornea.
- The new healthy donor cornea button is used to replace the diseased cornea tissue.
- Eye pad and shield are applied to protect the eye.
- The operation usually takes 1-2 hours.
- The procedure may be done with other operations at the same time e.g. cataract and glaucoma operation.

Possible Risks and Complications

Possible complications include complications that may occur during general anaesthesia or those that may occur in general corneal surgery and those associated with corneal transplant. They could occur days, weeks, months or even years after the procedure.

Possible Complications for General Corneal Surgery Include:

- Eye discomfort, gritty sensation, tearing
- Photophobia
- Glare
- Bleeding in eye
- Swelling and loss of corneal clarity
- Chronic inflammation
- Wound problems
- Infection

- Hasten the onset or deterioration of cataract
- Temporary or permanent blurring of vision because of macular swelling
- Detachment of the retina
- Glaucoma
- Double vision
- Poor vision, total loss of vision, or loss of eye

Possible Complications for Corneal Transplant Include:

- Wound problems
- Persistent epithelial defect
- Suture related complications
- Graft dehiscence/dislocation
- Graft interface haziness
- Infection
- Epithelial ingrowth
- Uveitis
- Glaucoma
- Retinal detachment
- Development of cataract or deterioration of preexisting cataract
- Graft failure (the implanted tissue fails its function and loss of corneal clarity)
- Astigmatism
- Refractive change
- Glare
- Rejection of graft
- Gradual endothelial dysfunction
- Recurrence of host disease thus forfeiting the goal of the operation
- Complications of prolonged steroid treatment (which is used to prevent rejection), including cataract development or deterioration, glaucoma and vulnerability to infection, poor wound healing and exacerbation of preexisting diseases like herpes
- Poor vision, total loss of vision or total loss of the eye resulting in blindness
- Expulsive bleeding
- Aggravation of preexisting herpetic infection
- Very rarely, transmission of donor disease (though all donors are screened for Hepatitis B, Hepatitis C, HIV, Syphilis before transplantation)

Information of the Donor

It is essential to keep the donor information confidential. The eye doctor will thoroughly assess the corneal donor to ensure suitability of the cornea for transplant. However because of various reasons like asymptomatic disease, window period of infections or endured time required for tests, pre-transplant diagnosis of all occult diseases may not be feasible, but the eye doctor will inform the corneal recipients as soon as such diagnosis is known.

Corneas may be donated from donors with malignancy. It is an international standard of accepting these donors. The risk of getting cancer will not be increased in patients who have received corneal transplant from these donors.

Before the Procedure

- Inform your doctor if you have other systemic disease such as hypertension, stroke, heart disease, diabetes or take western medication (especially blood thinners like Aspirin or Warfarin), traditional Chinese medicine or healthy supplements on a regular basis
- Fasting after midnight unless being told by doctor
- Use eyedrops as instructed

After the Procedure

- Keep eye pad on until it is removed by doctor
- Use eyedrops as prescribed
- Do not rub or apply pressure to the eye
- Wear sunglasses during the day and eye shield at night for protection
- It is advisable to 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.
- Wear clothes with buttons and not pullovers to avoid the clothes coming in contact with the operated eye to prevent infection
- Avoid strenuous exercise, sports and swimming
- Avoid bend down and heavy lifting

- Avoid unnecessary straining after operation. If you have constipation, take liberal amounts of water, vegetables and fruits after surgery if there is no contraindication.

Follow Up

- Follow instructions strictly on taking eyedrops and medication and see your doctor as scheduled
- Do not swim and avoid contact sports until being allowed by your doctor
- Avoid washing your hair for around one week to avoid dirty water getting into your operated eye causing infection
- If you have any excessive bleeding, severe pain, fever, signs of wound infection or sudden blurred vision, see your doctor immediately or attend any nearby Accident and Emergency Department.
- Since the operation involves transplantation from another person's tissue, immune reactions called rejection can occur at all times after the procedure. Regular follow up and long term eye medications may be required.

Remarks

In a very rare situation, local anesthetic injection may lead to globe perforation, central nervous system toxicity or even death.

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 operation, unpredictable condition may arise, and additional procedures may be performed if necessary. For further information, please contact your doctor.