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CORNEAL TRANSPLANTATION (KERATOPLASTY)

Of India's 10 million blind people, 15 to 20% have lost sight because of corneal opacity. Every year about 25,000 to 30,000 are added to this list of treatable blindness.

Cornea is the transparent front surface of the eye. Normally, when looking straight on at the eye, you look right through the cornea and see the coloured iris and black pupil of the eye.

Corneal transplantation or corneal grafting or keratoplasty involves removal of diseased or damaged cornea and its replacement by donated corneal tissue. Deceased individuals with no known corneal diseases can donate their corneas within 6-8 hours of their demise.

Who needs a Corneal Transplant?

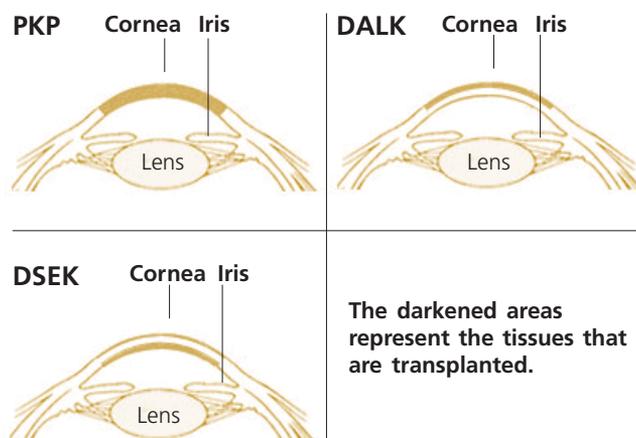
Indications:

- Optical: To improve vision in cases of corneal oedema, pseudophakic bullous keratopathy, keratoconus, corneal degeneration, keratoglobus and dystrophy, as well as scarring due to keratitis and trauma.
- Reconstructive: To preserve corneal anatomy and integrity in patients with corneal thinning and descemetocelles, or to reconstruct the anatomy of the eye, e.g. after corneal perforation.
- Therapeutic: To remove infection in the cornea.
- Cosmetic: To improve the appearance of patients with corneal scars that have given a whitish or opaque hue to the cornea.

Types of corneal transplants:

Traditionally over the years, **PKP (Penetrating Keratoplasty)** is the procedure being done which involves removal of the entire thickness of the host cornea and replacement with entire thickness of donor cornea. The donor cornea is stitched to the host tissue.

Recently, with advancements in surgical techniques and instrumentation, newer surgeries called lamellar transplantations are being done with very good results. In these procedures, only the diseased portion (only a part of the cornea) is replaced with healthy donor tissue, leaving the remainder of the cornea undisturbed. When the front portion of the cornea is replaced, it is called as **DALK (Deep Anterior Lamellar Keratoplasty)** and when the back portion of the cornea is replaced, it is called **DSEK (Descemet's Stripping Endothelial Keratoplasty)**.



FAQs - Corneal Transplantation Surgery

Q. Donor corneas... where do they come from?

A. "Donor" refers to the person who provides the cornea after death; Anyone can be a donor irrespective of age, sex or blood group. There is no need to match the tissue, eye color or gender for corneal transplants.

"Recipient" is the person receiving the cornea.

Q. Do I need to get hospitalized for corneal transplant surgery?

A. It is done as a day care procedure. (You go home the same day.)

Q. How long does the procedure last?

A. You will be in the hospital for approximately 4-5 hours.

Q. What kind of anaesthesia will be used?

A. Most cases are done under local anaesthesia which involves anaesthetising the whole area around the eye to be operated. Rarely for select cases general anaesthesia may be required.

Q. When will I need to return for a follow up clinic visit?

A. The first visit post surgery is on the next day and then as per the doctor's instructions. (usually weekly for first 3 visits). If from out of Mumbai, this has to be planned well as it depends on the cornea availability.

Q. When will I see an improvement in my vision?

A. This depends on the nature, duration and severity of the disease as well as other pre-existing ocular conditions which need to be addressed later. Most patients notice improvement in their vision during the first 3-4 weeks after surgery, with continued improvement later.

Q. Who performs the corneal transplant surgery?

A. Only a corneal surgeon who is trained for corneal transplants can perform this surgery.

Q. Does the human body reject the transplanted donor's cornea?

A. Corneas do not have any direct blood supply so the risk of rejection is very low. If a rejection occurs, it can be suppressed by timely medications.

Q. Do corneal transplants guarantee sight to all blind people?

A. No. Transplants only help when the loss of sight is solely due to a corneal defect and the rest of the eye's mechanism is intact.

FAQs - Eye Donation

Q. Does Eye Donation disfigure the donor's face?

A. It is a common misconception that, when donating the corneas, the body will be disfigured. This is not true. Today, instead of the earlier practice of removing the whole eyeball, now only a portion of the surface of the eye (cornea) is removed for donation.

Q. How will the donated corneas be used?

A. After the corneas are removed, they will be evaluated, processed, screened and suitably used by the eye surgeon.

Q. Is there any use for corneas which are for some reason not used for transplant?

A. Corneas which are not found viable for transplant are used for research and suitably used by the eye surgeon.

Q. How quickly should the eyes be removed after death?

A. As soon as possible, but not more than 6-8 hours after death.

Q. Is it necessary to transport the donor to the hospital after death?

A. No. Eye Banks have personnel who will come to the donor's home and remove the corneas. The procedure takes 30 minutes approximately.

Q. Do cataracts or use of spectacles render the cornea unfit for donation?

A. No. Both these conditions are related to the lens of the eye and not the cornea.

Q. What conditions render corneas unfit for donation?

A. Corneas of persons suffering from AIDS, jaundice, brain cancers, rabies, syphilis, tetanus and septicaemia are considered unfit for donation. At the time of cornea removal, a blood sample from the donor is taken and tests for HIV, Syphilis and Hepatitis are carried out at the Eye Bank.

Q. What about diabetes and hypertension?

A. Donors with these conditions can donate their eyes.

This leaflet is intended to provide general information for patients.



Know your Corneal Surgeon at Shroff Eye

Dr. Vishal Shah has trained at world renowned institutes – Sankara Netralaya, Chennai and L. V. Prasad Eye Institute Hyderabad.

His surgical experience includes corneal transplantation surgery – Penetrating and Lamellar (PK, DALK and DSEK).

"Pledge and Donate Your Eyes on www.shroffeye.org"

Shroff Eye Opener # 91

Today, during cornea donation instead of the earlier practice of removing the whole eyeball from a deceased person, now only a portion of the surface of the eye (cornea) is removed.

Shroff Eye Hospital is India's first eye hospital to be accredited by JCI – Joint Commission International, USA for excellence in patient care and health care delivery

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