

VIJAY TIMES Health & Fitness

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THE CORNEA is the clear 'dome-like window' covering the front of the eye that allows light to pass through it to the retina, enabling us to see. In simple terms, it is just like the glass cover on your wrist watch. To enable a clear vision, the cornea must remain healthy and transparent. A corneal transplant is the transfer of corneal tissue from a donor to a recipient. Whole eye transplants are not possible and is a myth among general public.

How is corneal grafting done?

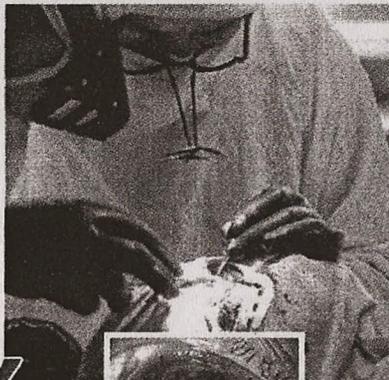
The patient is called to hospital as soon as the donor cornea is received and found to be fit for grafting. Sample of blood, obtained from the donor is used to identify infectious diseases such as Hepatitis or HIV-AIDS, etc. A thorough examination of the donor cornea is also done before deciding to use the tissue.

The surgical operation itself lasts about an hour. The eye is not removed during the operation. A central piece of cornea is cut and removed. This is replaced by the clear donor cornea, which is treated prior to

surgery with an antibiotic solution.

The grafted cornea is then sutured with fine stitches, which may be required to be in place for up to two years. The cornea could take at least a year to heal completely. After the surgery, the operated eye is covered with an 'eye pad'.

This is removed a day after the operation and



doctor. If any symptoms are noticed, they are treated as an emergency development and taken care of.

Graft rejection

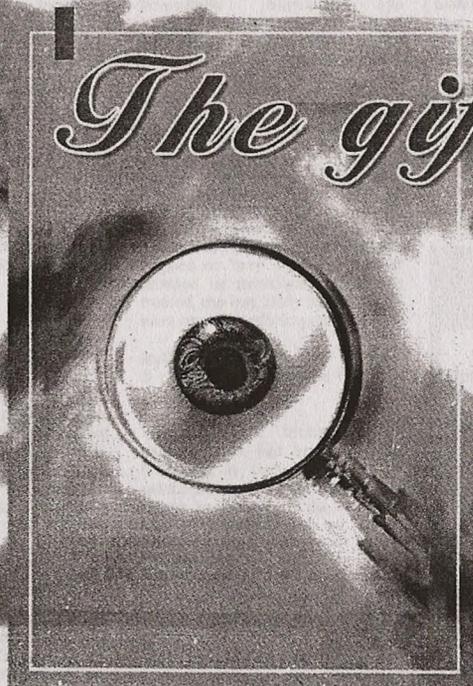
Incidence of corneal graft rejection occurs in 5 to 30 per cent of patients. However, such a complication is likely in any procedure involving tissue transplantation from one person to another. Graft rejection takes place due to reaction of the patient's immune system to the donor tissue. Cell surface proteins called histocompatibility antigens, trigger this reaction. These antigens are often associated with vascular tissue (blood vessels) within the graft tissue. Since the cornea normally contains no blood vessels, it experiences a very low rate of rejection.

In most cases, blood typing and tissue typing are not needed in corneal trans-



The gift

of sight



Indications

Corneal transplant is resorted to in case of loss of vision due to damage of the cornea as a result of disease or injury. Some of the conditions that might require corneal transplant include the outward bulging of the cornea (keratoconus), malfunction of an inner layer of cornea (Fuchs' dystrophy) and painful swelling of the cornea after cataract surgery (pseudophakic bullous keratopathy). Some of these conditions cause cloudiness of the cornea; others alter its natural curvature, which can also affect the quality of vision.

Injury to the cornea can occur because of chemical burns, mechanical trauma, or infection by viruses, bacteria, fungi, or protozoa. Herpes virus is one of the more common infections leading to a need for corneal transplant.

Surgery would only be used when damage to the cornea is too severe to be treated with corrective lenses. Occasionally, corneal transplant is combined with other types of eye surgery (such as cataract surgery) to solve multiple eye problems in one procedure.

If cornea is damaged due to disease or injury, corneal transplant can help in restoring vision

normal activities can be resumed by the patient as and when the individual feels able enough to do so.

Care after surgery

Corneal grafting offers a reasonable chance of visual improvement in case of damage to front of the eye due to injury or disease. Although the success rate is good for many conditions, the outcome can be affected by the patient's general health and the condition of his eye. Steroid drops are prescribed to prevent inflammation and graft rejection.

Complications

Serious complications following surgery are uncommon but like all major eye operations, there is an increased risk of haemorrhage or other damage. Serious complications may include infection, cataract, retinal detachment and glaucoma.

For this reason, it is essential that all follow-up appointments are kept with the

plants. Also, a close match between a donor and a recipient is not required. Symptoms of rejection include persistent discomfort, sensitivity to light, redness, or a change in vision.

If a rejection reaction does occur, it can usually be blocked by steroid treatment.

Rejection reactions may become noticeable within weeks after surgery, but 'rejection' may not occur until 10 or even 20 years after the transplant. When full rejection occurs, the surgery usually needs to be repeated.

How safe is the procedure

Corneal transplant is a safe and reasonably successful procedure. It is also, more often than not, the only hope for corneal blind persons.

It wouldn't be out of place to remind people that signing-up for eye donation is a noble service to mankind and a lasting gift to the one who most needs it. ■