

Corneal Graft

What is a Corneal Graft?

When a damaged cornea cannot be improved by other treatment, a corneal graft may be performed.

The coloured iris and the black pupil can be seen through the cornea, which is the clear outer layer at the front of the eye. The cornea helps to focus and transmit light as it passes to the lens and on to the retina at the back of the eye. When light reaches the retina it is converted into impulses which are transmitted via the optic nerve to the visual centre in the brain.

Damage to the cornea affects sight by preventing light from passing freely to the retina causing the picture passed by the retina to the brain to become patchy or distorted.

Corneal grafts may improve sight, alleviate pain and, in the case of ruptured corneas, repair perforations.

Source of Corneas for Transplantation

Corneas are removed from the eyes of people who have died. The individuals, or his/her family, consent to the medical use of the eyes after death.

Corneas are not taken from donors known to have infectious conditions. All donors are screened for carriers of AIDS or Hepatitis viruses before their corneas are used.

There may be delays in obtaining a cornea in the correct condition. If no suitable cornea is available then the recipient will have to wait until the death of a donor for the operation to be performed.

Treatment

Eye drops, drugs, spectacles or contact lenses will be first treatments of choice for corneal problems and only where these are not helpful will surgery be considered.

Usually a patient will be called to hospital the day before the operation. Urine and blood checks and, in some cases, an ECG (electrocardiogram) will be taken before the operation which will usually be carried out under a general anaesthetic and will last about one hour. The eye will not be removed during an operation.

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A central piece of poor cornea is cut through and removed. This will be replaced by the clear donor cornea, which will have been treated prior to surgery with an antibiotic solution. The grafted cornea will be sewn with very fine stitches, which may stay in place for up to two years. The cornea can take at least a year to heal completely and this governs the time stitches will need to remain in place. After surgery, the operated eye will be covered with an eye pad and protective plastic eye shield. This will be removed the day after the operation and normal activities may be resumed as and when the individual feels able to do so. Return home is usually within a few days of the corneal graft.

Prognosis

Immediately following the operation sight will probably be blurred. The eye may water and be sensitive to light. You will not have clear and useful sight immediately and for the first few months after the graft the healing process can cause sight fluctuations. Corneas vary in shape and sometimes the shape of the donor cornea is different from the one it replaces. Glasses or contact lenses may be prescribed to correct the difference. These are usually given several months after the operation. This is because the cornea takes time to heal. Since the cornea is transparent there will be very little change to the appearance of the eye. The colour of the eye, which is determined by the iris, will not be affected but stitches may be barely noticeable until they are removed. Older people may develop a white circle around the edge of the cornea, which is harmless and is because of ageing, not the operation.

Aftercare and Possible Complications

Corneal grafting offers a reasonable or good prospect of visual improvement where the front of the eye is damaged by injury or disease. Although the success rate is good for many conditions general health and the condition of your eye will affect the outcome.

Serious complications following surgery are uncommon but like all major eye operations, there is an increased risk of haemorrhage (bleeding in the eye) or other damage. Complications may include infection or additional eye problems such as cataract or retinal detachment. For this reason it is essential that all follow-up appointments are kept and that any symptoms are treated as an emergency as soon as they are noticed.

It is important to be aware of the possibility of rejection at any time after a graft. Prompt treatment is essential and, even years later, should there be any symptoms of rejection prompt treatment should be sought from the

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nearest Eye Casualty Department within 24 hours in order to prevent loss of sight or the need for a repeat graft.

Any of the following symptoms may indicate a problem: pain, decrease in sight or redness of the eye. To help prevent infection and rejection, drops will be prescribed which must be applied exactly as directed by the ophthalmologist for a period of six months or more. You should avoid rubbing and touching your eye. Your ophthalmologist will tell you when you may return to work or pursue sports, especially swimming.

Support Organisations

The Partially Sighted Society will be able to advise on low vision services, aids and lighting.

The Partially Sighted Society

62 Salusbury Road
London NW6 6NS
Telephone: 020 7372 1551

Moorfields Eye Hospital

NHS Trust
City Road
London
EC1V 2PD
Telephone 202 7253 3411
FAX 0171 253 4696

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