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Department of Ophthalmology

Keratoconus

What is Keratoconus (KC)?

Keratoconus is a condition of the eye where the cornea is conical or cone shaped. The normally round, dome shaped cornea (the clear window at the front of the eye, through which we focus) gradually thins and stretches to a cone shape. This makes the eyes more short sighted and the irregular shape leads to distorted and blurred vision.

This condition is not common but normally begins in the early teenage years. It affects both eyes, although one eye is usually affected before the other.

It does not cause blindness, but good vision may be difficult to maintain at times as the condition progresses.

With current treatments available, most people should be able to lead a normal lifestyle.

What are the symptoms?

Keratoconus can be difficult to detect because it usually develops slowly. In the early, mild stages Keratoconus may result in an increase in short sight and astigmatism (distorted vision). Patients often need a prescription change every time they visit their eye care specialist.

As the condition progresses the vision may be affected by glare and sensitivity to light. With further progression the vision may become increasingly distorted and corneal scarring may develop.

In the advanced stage, there may be a sudden clouding of vision in one eye that clears over a period of weeks or months. This is called ‘acute

hydrops' and is due to fluid seeping into the stretched cornea. If this sudden change occurs, you should attend the Eye Casualty for treatment.

Keratoconus progresses slowly, taking between 10 to 20 years to develop. It may stop at any stage from mild to severe with no further progression.

What are the causes?

The causes are not known. The condition has been linked with allergies and an imbalance of enzymes (a protein that regulates chemical reactions) within the cornea. It has also been suggested that there is a genetic connection.

What is the treatment?

In the early stages the condition can be managed with glasses or soft contact lenses.

As the condition progresses, rigid, gas permeable contact lenses are used. These allow oxygen to pass through to the cornea, whilst giving it a new regular surface to improve vision. There are other types of contact lenses which may be used. Your doctor can discuss this with you.

It is important to strictly follow the hygiene instructions given when the lenses are fitted.

Good vision may be difficult to maintain at times as the condition progresses and contact lens tolerance varies.

Contact lenses do not slow down the rate of progression of the condition, but they do provide good vision during that period, which could not otherwise be achieved. The condition does eventually stabilise, although it can take many years for this to occur.

In severe cases where the cornea becomes extremely steep, scarred, thin and irregular, or the vision can no longer be corrected with contact lenses, a corneal transplant or graft may be considered. Recovery time can be as long as 18 months and although vision is improved, to achieve best vision, it is usually necessary to wear contact lenses or glasses.

What are the risks associated with the treatments?

- There is a small risk of infection when wearing contact lenses and the risk increases if they are not kept clean.
- Rigid lenses may be more uncomfortable than the soft ones.
- Any surgery carries its own risks. After a transplant of the cornea, there is a risk of rejection, although 90% of transplant operations are successful.

For those patients who have been advised to consider corneal transplant surgery there is a separate information leaflet giving more details about the procedure.

Further Information

The Keratoconus Group

P O Box 26251
London
W3 9WQ
Tel: 020 8993 4759
Web: **www.keratoconus-group.org.uk**

UHCW Eye Casualty

Open Monday to Thursday 8.30am – 4.30pm, Friday 8.30 – 4.00pm, Saturday 8.30am – 12noon

Telephone 024 7696 6627 or via the hospital switchboard 024 7696 4000

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