

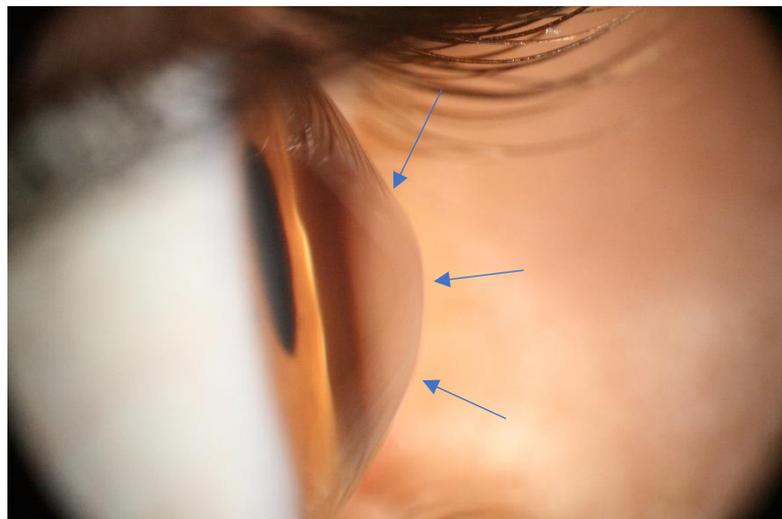
Keratoconus

Keratoconus is the commonest condition in a family of disorders called the corneal ectasias. Other members of the family include keratoglobus and pellucid marginal degeneration.

The word Keratoconus is formed by two Greek words: kerato, meaning cornea, and konos, meaning cone. Keratoconus affects approximately 1 in 2000 of the population, presenting mainly in the late teens or early 20s and remains the commonest indication for corneal transplantation in this age group.

Keratoconus itself is a condition in which the shape of the cornea, which is usually curved like a football, is distorted, developing a cone-shaped bulge, similar to that of a rugby ball, resulting in reduced vision. Progression of the condition depends on many factors but includes the age at the time of the onset. The earlier the onset, the faster keratoconus progresses.

A cornea with a patient with keratoconus, showing the typical bulging forward of the cornea into a 'nipple' shape, identified with the 3 arrows



The condition is almost always bilateral and asymmetric - meaning that it affects both eyes, however one eye may be more affected than the other.

Making a referral:

What are the symptoms of keratoconus?

Keratoconus often presents in the teens with increasing short sightedness (difficulty seeing in the distance), or increasing astigmatism. Often patients will attend their optician initially

What causes Keratoconus?

The cause of Keratoconus is unknown. We do however, know several risk factors including heredity factors, eye rubbing, certain underlying disorders such as Downs Syndrome. Individuals often suffer from allergic eye disease.

Keratoconus treatment

What are the potential treatments?

There are no definite treatments for keratoconus

- Eyeglasses in the early stages.
- Rigid contact lenses: when eyeglasses do not work
- CXL - Corneal Collagen Cross linking with Riboflavin - increases the strength of the cornea to prevent progress
- Intracorneal rings (Intacs and Ferrara)
- Corneal transplant: in advanced stages - either a partial thickness (Deep Anterior Lamellar or DALK) or full thickness (Penetrating or PK).

Making a referral:

Collagen Crosslinking of the cornea

This is a non-invasive treatment for patients with keratoconus. The aim of this procedure is to strengthen an already weak cornea by 'cross linking' the collagen fibres found in the cornea.

These collagen fibres are increased to form a strong network which reinforces the structure of the cornea. The aim is to prevent any outward bulging of the cornea which then becomes irregular and too steep. This is the chief cause of keratoconus.

The procedure is a relatively quick procedure which can be combined with ICR's or INTACS. The surgeon administers special riboflavin drops to the eyes and activates these by immersing the surface of the eye in a specific wavelength of light.

What happens is that this process stimulates the production of the cross-linking of collagen fibres within the cornea. This results in a stronger cornea.

The surgeon will then place a soft contact lens into the eye which must be worn for the first 24 hours following this procedure.

This procedure takes around an hour and half.

You will be given eye drops and a set of instructions for their use. Please stick to these instructions as this will help to prevent any infection.

When combined with ICR/INTACS, this has the effect of flattening the bulging cornea as well as strengthening it.

Making a referral:

Research has also shown it to be effective in stabilising patients who have undergone RK (radial keratectomy). Evidence shows that the results are permanent.

Prognosis

Keratoconus is progressive in nature causing increasing astigmatism and thinning of the cornea. However, progression generally slows and ceases in the early 30s. The goal of treatment is to ensure that we monitor for progression and treat accordingly. Treatment is only undertaken to stop progression, not cure the condition. Using contact lenses does not make the condition better or worse. They are there to improve vision.

In advanced cases, corneal transplantation maybe needed to help with visual recovery.

Making a referral:

Email: Info@Communityeyecare.org.uk

Tel: 01772 717167

Fax: 01772 795620

Community Eyecare, 6 Fulwood Park, Caxton Road, Preston, PR2 9NZ