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Keratoconus diagnoses, when and how?

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Abstract

Keratoconus is an ectatic corneal disease that touch Young population and leads to visual impairment. His prevalence is 1/2000, but surely under diagnosed because corneal topography and tomography is not as spread all over the world. This course will discuss indications of corneal topography and tomography in clinical practice, and when should we suspect keratoconus clinically.It will describe topographic and tomographic features in the diagnosis of keratoconus. The contribution of new technology of OCT based tomography and epithelial mapping in the diagnosis and evolution of corneal ectatic diseases will be presented.

Introduction

Keratoconus may be a vision disorder that happens when the normally round cornea (the front a part of the eye) becomes thin and irregular (cone) shaped. This abnormal shape prevents the sunshine entering the attention from being focused correctly on the retina and causes distortion of vision.

In its earliest stages, keratoconus causes slight blurring and distortion of vision and increased sensitivity to glare and lightweight. These symptoms usually appear in the late teens or early 20s. Keratoconus may progress for 10-20 years then slow in its progression. Each eye may be affected differently. As keratoconus progresses, the cornea bulges more and vision may become more distorted. In a small number of cases, the cornea will swell and cause a sudden and significant decrease in vision. The swelling occurs when the strain of the cornea's protruding cone-like shape causes a small crack to develop. The swelling may last for weeks or months because the crack heals and is gradually replaced by connective tissue. If this sudden swelling does occur, your doctor can prescribe eye drops for temporary relief, but there are not any medicines which will prevent the disorder from progressing.

Eyeglasses or soft contact lenses could also be wont to correct the mild nearsightedness and astigmatism that's caused by the first stages for keratoconus. As the disorder progresses and cornea continues to thin and alter shape, rigid gas permeable contact lenses are often prescribed to correct vision adequately. In most cases, this is adequate. The contact lenses must be carefully fitted and frequent checkups and lens changes could also be needed to realize and maintain good vision. Progressive keratoconus are often treated by corneal collagen cross-linking. This one-time, in-office procedure involves the appliance of a B-complex vitamin solution to the attention, which is then activated by ultraviolet for about half-hour or less. The solution causes new collagen bonds to make, recovering and preserving a number of the cornea's strength and shape. While the treatment cannot make the cornea entirely normal again, it can keep vision from getting worse and, in some cases, may improve vision. The procedure may require the removal of the thin outer layer of the cornea (epithelium) to allow the riboflavin to more easily penetrate the corneal tissue. Cross-linking was approved as a treatment for keratoconus by the FDA in April 2016, after clinical trials showed that it stopped or produced a light reversal in bulging of the cornea within three to 12 months after the procedure. Keratoconus may be a progressive disease that causes a thinning of the clear front surface of the attention (cornea) and distorts the cornea into a cone-like shape. Keratoconus causes distorted vision that can't be corrected with eyeglasses. Most cases of keratoconus become apparent during a person's teens or early 20s.

With keratoconus, the clear, dome-shaped tissue that covers the attention (cornea) thins and bulges outward into a cone . Its cause is unknown. Symptoms first appear during puberty or the late teens and include blurred vision and sensitivity to light and glare. Vision can be corrected with glasses or contact lenses early on. Advanced cases may require a cornea transplant. Keratoconus is caused by a decrease in protective antioxidants within the cornea. The cornea cells produce damaging by-products, like exhaust from a car. Normally, antioxidants get rid of them and protect the collagen fibers. If antioxidant levels are low, the collagen weakens and therefore the cornea bulges out.

Keratoconus is typically not genetic but sometimes runs in families. If you have it and have children, it's a good idea to have their eyes checked for it starting at age 10. The condition progresses sooner in people with certain medical problems, including certain allergic conditions. It could be related to chronic eye rubbing. With severe keratoconus, the stretched collagen fibers can cause severe scarring. If the rear of the cornea tears, it can swell and take many months for the swelling to travel away. This often causes a large corneal scar.