The Eye Center

Ophthalmology • Refractive Surgery

Laser, Cataract & Implant Surgery

FUCHS' DYSTROPHY AND OTHER DYSTROPHIES

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Definition

Fuchs' dystrophy is a slowly progressing disease that usually affects both eyes and is slightly more common in women than in men. Although doctors can often see early signs of Fuchs' dystrophy in people in their 30s and 40s, the disease rarely affects vision until people reach their 50s and 60s.

Symptoms

Fuchs' dystrophy occurs when endothelial cells gradually deteriorate without any apparent reason. As more endothelial cells are lost over the years, the endothelium becomes less efficient at pumping water out of the stroma. This causes the cornea to swell and distort vision. Eventually, the epithelium also takes on water, resulting in pain and severe visual impairment.

Epithelial swelling damages vision by changing the cornea's normal curvature, and causing a sight-impairing haze to appear in the tissue. Epithelial swelling will also produce tiny blisters on the corneal surface. When these blisters burst, they are extremely painful.

At first, a person with Fuchs' dystrophy will awaken with blurred vision that will gradually clear during the day. This occurs because the cornea is normally thicker in the morning; it retains fluids during sleep that evaporate in the tear film while we are awake. As the disease worsens, this swelling will remain constant and reduce vision throughout the day.

Treatment

When treating the disease, doctors will try first to reduce the swelling with drops, ointments, or soft contact lenses. They also may instruct a person to use a hair dryer, held at arm's length or directed across the face, to dry out the epithelial blisters. This can be done two or three times a day.

When the disease interferes with daily activities, a person may need to consider having a corneal transplant to restore sight. The short-term success rate of corneal transplantation is quite good for people with Fuchs' dystrophy. However, some studies suggest that the long-term survival of the new cornea can be a problem.

Corneal Dystrophies

A corneal dystrophy is a condition in which one or more parts of the cornea lose their normal clarity due to a buildup of cloudy material. There are over 20 corneal dystrophies that affect all parts of the cornea. These diseases share many traits:

1. They are usually inherited.
2. They affect the right and left eyes equally.
3. They are not caused by outside factors, such as injury or diet.
4. Most progress gradually.
5. Most usually begin in one of the five corneal layers and may later spread to nearby layers.
6. Most do not affect other parts of the body, nor are they related to diseases affecting other parts of the eye or body.
7. Most can occur in otherwise totally healthy people, male or female.

Corneal dystrophies affect vision in widely differing ways. Some cause severe visual impairment, while a few cause no vision problems and are discovered during a routine eye examination. Other dystrophies may cause repeated episodes of pain without leading to permanent loss of vision.

Some of the most common corneal dystrophies include Fuchs' dystrophy, keratoconus, lattice dystrophy, and map-dot-fingerprint dystrophy.