Definition

Lattice dystrophy gets its name from an accumulation of amyloid deposits, or abnormal protein fibers, throughout the middle and anterior stroma. During an eye examination, the doctor sees these deposits in the stroma as clear, comma-shaped overlapping dots and branching filaments, creating a lattice effect.

Over time, the lattice lines will grow opaque and involve more of the stroma. They will also gradually converge, giving the cornea a cloudiness that may also reduce vision.

Historically, multiple corneal dystrophies were present in the same patients suggesting that these diseases could be closely related biochemically.

Since the ancestors of the first several families found with this condition could all be traced to a small province of Italy known as Avellino, the combination of lattice dystrophy with other dystrophies is known as Avellino corneal dystrophy.

Symptoms
In some people, these abnormal protein fibers can accumulate under the cornea's outer layer - the epithelium. This can cause erosion of the epithelium.

This condition is known as recurrent epithelial erosion. These erosions: (1) Alter the cornea's normal curvature, resulting in temporary vision problems; and (2) Expose the nerves that line the cornea, causing severe pain. Even the involuntary act of blinking can be painful.

**Treatment**

To ease this pain, a doctor may prescribe eye drops and ointments to reduce the friction on the eroded cornea. In some cases, an eye patch may be used to immobilize the eyelids. With effective care, these erosions usually heal within three days, although occasional sensations of pain may occur for the next six-to-eight weeks.

By about age 40, some people with lattice dystrophy will have scarring under the epithelium, resulting in a haze on the cornea that can greatly obscure vision. In this case, a corneal transplant may be needed. Although people with lattice dystrophy have an excellent chance for a successful transplant, the disease may also arise in the donor cornea in as little as three years.

In one study, about half of the transplant patients with lattice dystrophy had a recurrence of the disease from between two to 26 years after the operation. Of these, 15 percent required a second corneal transplant. Early lattice and recurrent lattice arising in the donor cornea responds well to treatment with the excimer laser.

Although lattice dystrophy can occur at any time in life, the condition usually arises in children between the ages of two and seven.