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### Initiative

## Corneal Cross Linking Treatment for Keratoconus now in India

**The method works by increasing collagen cross linking, which are the natural anchors within the cornea**

Corneal Collagen Cross linking with Riboflavin (C3-R), a treatment for keratoconus, a disease of the cornea, recently was pioneered in India by Mumbai's Dr Vinay Agarwal of Clear Vision Eye Centre, a corneal surgeon specialising in keratoconus management.

Keratoconus makes the cornea become weak and it may gradually bulge outward. Most often, this bulging is in the lower half of the cornea and first presents as astigmatism. "However, not all astigmatism is due to keratoconus. In mild or early stages of Keratoconus (forme fruste keratoconus), eyeglasses may correct the astigmatic vision," informs Dr Agarwal.

C3-R has been proven to strengthen the weak corneal structure. This method works by increasing collagen cross linking, which are the natural anchors within the cornea. These anchors are responsible for preventing the cornea from bulging out and becoming steep and irregular, consequence of advanced keratoconus.

Dr Agarwal has successfully performed corneal cross linking on a number of patients from across the country and abroad. He says, "Corneal Cross Linking is the first real treatment for my keratoconus patients. The achievement of stabilisation is a dramatic event in the life of these patients with a disease that is otherwise progressive and affects both eyes."

The 30-minute non-invasive C3-R treatment is performed in the doctor's office. During the treatment, custom-made riboflavin eye drops are applied to the cornea, which is then activated by ultraviolet light. This amazingly simple process has been shown in laboratory and clinical studies to increase the amount of collagen cross-linking in the cornea and strengthen the cornea. In published European studies, such treatments were proven safe and effective in patients.

The abnormal curvature of the cornea due to keratoconus changes the cornea's refractive error producing moderate to severe blurriness of vision. "As keratoconus advances, rigid gas-permeable (RGP) contact lenses maybe the only non-surgical way to achieve clear vision," says Dr Agarwal. If the disease continues to advance, scarring of the central cornea may occur.



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Approximately, half of keratoconus patients have no negative lifestyle effects beyond corrective lenses. The cornea stabilises after a few years without ever causing severe vision problems. For others, the only resolution to keratoconus has been penetrating keratoplasty (PKP), with a long healing period and unpredictable refractive error. Even after corneal transplant PKP, keratoconus can reoccur in the new donor cornea.

EH News Bureau



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