ANOTHER VIEW OF KERATOCONUS

I am disappointed with Dr. Karla Zadnik's article, "Evaluating RGP Fit in Keratoconus" (RGP Insights, Sept. 1996).

Why don't we ever read about practitioners who use rigid aspheric lenses fit to the superior periphery (intermediate alignments) as illustrated in Figures 1 and 2?

Apical clearance or minimal touch with spherical contact lenses is the older, conservative, traditional way to fit keratoconus patients. When you use a corneal topographer, you see that the healthiest part of the keratoconic cornea is in the superior surface, which is considerably flatter than K on a keratometer.

The inferior cornea is invaginated or steep under the cone and most diseased. Do we fit to the healthiest part of the cornea and preserve what's living, or focus on the steeper area, where the cornea is more diseased? Are low powered reading spectacles used in addition to contact lenses for pre-presbyopic keratoconus patients? Do the authors address the low IOPs of keratoconus and the close relationship of the trabecular meshwork and the ciliary muscle? Is there a relationship with the ciliary muscle's possible hypertonicity or poor flexibility causing changes in the corneal curvature from within? These are very soft, extremely dynamic corneas.

FIG. 1: BEFORE RIGID ASPHERIC FIT TO SUPERIOR PERIPHERY.

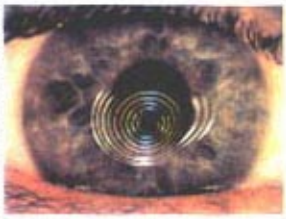

FIG. 2: AFTER RIGID ASPHERIC LENS FIT TO SUPERIOR PERIPHERY

We must start looking at the whole corneal surface. Keratoconic corneas are very aspheric and irregular, so fitting and aligning with an aspheric RGP lens makes sense. Lenses having a base curve aligned to the flatter superior periphery (5.8mm to 6.5mm from center) that center and move well on the cornea, and that pump in fresh oxygenated tears and pump out waste should help maintain homeostasis and corneal health.

I'd like to challenge the universities that are participating in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) to take 'before' and 'after' topography studies of both fitting philosophies. Topographical photos can show us if steeper or flatter fits are better for corneal health, visual acuity (with contact lenses and unaided), contour and wearing time. We're all trying to find out what works for keratoconus and a picture is worth a thousand words.

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Editor's note: The CLEK study, a 5-year study of 1,000 keratoconus patients, will evaluate quality of life, case history, contact lens wearing time, visual acuity, corneal findings, corneal scarring, corneal topography, mode of treatment, contact lens fit, rigid contact lens base curve radius just clearing the corneal apex, corneal photography and fluorescein pattern photography.