A Case of Simultaneous Keratoconus and Fuch’s Dystrophy

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INTRODUCTION
Keratoconus is a corneal dystrophy associated with progressive corneal ectasia and scarring. With no definitive etiology, the corneal ectasia ultimately leads to irregular astigmatism, central anterior scarring, and reduced vision. It is believed that genetics, the environment (eye rubbing, allergies), and the individual’s endocrine system all play a role in the onset, progression, and stabilization of keratoconus. Fuchs dystrophy is a hereditary, progressive disease of the corneal endothelium which results in endothelial cell loss, thickening of Descemet’s membrane, corneal edema, and, in late stages, bullous keratopathy. It has a female predilection with an autosomal-dominant inheritance pattern.

CASE
A 38-year-old Black female with keratoconus presented to the contact lens service complaining of blurry vision, worse in the morning, with her current contact lenses (CLs). She was currently wearing soft CLs as it provided some improvement in visual acuity and had previously failed with corneal gas permeable (GP) lenses due to discomfort. Her last examination was two years prior. Slit lamp exam was remarkable for mild stromal edema with inferior/central thinning; there was also a beaten metal appearance with corneal guttata in both eyes. Dilated fundus examination was unremarkable in both eyes. Various topical medications were started in order to reduce the edema, and corneal examination was unremarkable in both eyes. Various medications were tried in order to see if improvement in visual acuity could be obtained.

Ocular and Medical History
(+ Keratoconus OU
--Mild corneal thinning OU but no other corneal findings noted then. Has been wearing Purevision2 spheres (previously 20/40 OD, 20/50 OS).

*Last medical exam: 2 months prior: denies any medical conditions, medications, or allergies.

Exam Findings
Visual acuity (with soft CLs): Manifest Refraction:
OD: 20/60
OS: 20/200

REFERENCES