

Could it be KC (KERATOCONUS)?

KC File #1: The Patient Who Corrects to 20/20



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A 29-year-old patient came to our office for a LASIK consult because she was unhappy with fluctuating vision in her contact lenses. The patient had ocular allergies but had no other ocular diagnoses.

Her entering glasses prescription was a modest one and we were able to refract her to 20/20. However, the refraction in the right eye was our first clue that something was not quite right.

Not only is >2.00 D of refractive cylinder a warning signal for keratoconus, but the oblique axis is also unusual. About 90% of young corneas have with-the-rule (WTR) astigmatism.¹ The change in myopic spherical equivalent (SE) from baseline (the glasses prescription) was not what we would expect to see in an adult patient, either.

Autokeratometry from her referring optometrist was on the steeper side of normal, and our pachymetry measurements showed that both eyes had borderline thin corneas. Upon further questioning, the patient recalled that her sister had keratoconus. Having a first-degree relative (a parent, sibling, or child) with keratoconus increases the risk of developing the disease by 15- to 67-fold.²

At this point, we have some risk factors, but not a clear diagnosis. A closer look at topography, tomography, and anterior segment OCT epithelial mapping provided further information to make a decisive diagnosis of progressive keratoconus in the right eye.

This case illustrates that patients who see 20/20 at the phoropter can still have keratoconus. At 29, our patient was at an age where there is greater risk of progression,³ and her ocular allergies and family history elevate that risk. She was fortunate to be diagnosed and treated early in the course of her disease, while she was still correctible to 20/20. **Simply by following the KC clues that are hiding in plain sight, you can help patients like this one preserve their vision by referring them to a corneal specialist. If further testing confirms the patient has progressive KC, iLink® cross-linking could slow or halt its progression. Visit iDetectives.com to learn more.** ●

REFERENCES:

1. Kojima T, et al. *Am J Ophthalmol* 2020;215:127-34. 2. Wang Y, et al. *Am J Med Genet* 2000;93(5):403-9. 3. Ferdi AC, et al. *Ophthalmology* 2019;126(7):935-45.

#FollowTheClues



INDICATIONS Photrexa® Viscous (riboflavin 5'-phosphate in 20% dextran ophthalmic solution) and Photrexa® (riboflavin 5'-phosphate ophthalmic solution) are indicated for use with the KXL System in corneal collagen cross-linking for the treatment of progressive keratoconus and corneal ectasia following refractive surgery.

IMPORTANT SAFETY INFORMATION Corneal collagen cross-linking should not be performed on pregnant women. Ulcerative keratitis can occur. Patients should be monitored for resolution of epithelial defects. The most common ocular adverse reaction was corneal opacity (haze). Other ocular side effects include punctate keratitis, corneal striae, dry eye, corneal epithelium defect, eye pain, light sensitivity, reduced visual acuity, and blurred vision. These are not all of the side effects of the corneal collagen cross-linking treatment. For more information, go to www.livingwithkeratoconus.com to obtain the FDA-approved product labeling. You are encouraged to report all side effects to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

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Refraction and exam findings

	RIGHT EYE	BCVA	LEFT EYE	BCVA
Lensometry	-0.50 -1.50 x31	20/30	-1.50 -0.50 x172	20/20-
Refraction at Phoropter	-0.75 -2.25 x34	20/20	-1.75 -0.75 x160	20/20+
Pachymetry	478 µm		483 µm	
Autokeratometry	45.5 / 47.50 x 112		44.9 / 46.75 x 80	

KC File #1: THE CLUES

- Large change in refraction from lensometer to phoropter
- High astigmatism (-2.25 D) with an oblique axis
- Borderline thin corneas (478/483 µm)
- Relatively steep auto Ks (47.5)



iDetective
Following the clues
for early KC detection