Fitting a K-Max Lens on a Patient with a Corneal Scar

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Purpose
To present a case of a patient with a corneal scar secondary to Herpes Zoster Ophthalmicus who was successfully fit with a K-Max lens design in order to regain visual function.

Method
Visual acuity and slit lamp exam were used for diagnosis and assessment. K-Max gas permeable lenses were used for diagnostic fitting.

Results
The patient had a superior temporal corneal scar of her right eye and had unaided visual acuity of 20/300, but improved to 20/50 with pinhole. A K-Max lens of diameter 11.5mm and base curve of 7.71mm was the best fitting diagnostic lens and an over-refraction determined the final lens power to be +1.50. All other parameters were ordered as standard. At the dispense, the patient was able to see 20/40 with a well positioned lens. She returned 2 weeks later satisfied with the vision and comfort that the K-Max lens provided and no remakes were necessary.

Discussion
• The K-Max lens design is a large diameter corneal gas permeable (gp) contact lens that comes in a standard diameter of 11.5mm.
• Failure of standard corneal gp lenses that have diameters of 9.5mm or smaller often fail on irregular corneas because of decentration and/or inadequate bearing distribution. The relatively large size of the K-Max lens allows it to achieve good centration and diffuse bearing distribution on mild to moderate corneal irregularity, which ultimately improves comfort and consistency of vision.
• Using diagnostic lenses is a must when fitting the K-Max lens on irregular corneas in order to have success. The base curve of the initial diagnostic lens is best determined by using the median simulated keratometry readings from corneal topography.

Conclusion
The K-Max lens design is an excellent choice for fitting patients with mild to moderate corneal irregularity. Its relatively large size improves centration and bearing issues that are often seen in smaller gp lenses fit on these patients.

K-Max
Diameter: 11.5mm
Base curve: 7.714 (43.75 diopters)
Power: +1.50
OZ: 6.90mm
PC1/w: 7.714mm/1.9mm
PC2/w: 11.8mm/0.4mm
CT: 0.25mm