the equivalent K readings at 4.5 mm. Our study investigated virgin corneas prior to cataract surgery. In the introduction, we stated that “[t]he Scheimpflug device . . . has found a place in the preoperative biometry of eyes with cataract that have previously had refractive surgery.” These were carefully chosen words, since the choice of lens power for post-refractive-surgery patients with cataract still represents a significant challenge for the cataract surgeon. Scheimpflug imaging has certainly increased the options available with the advent of software such as the BESSst formula1 and the Holladay equivalent K readings, but as correctly stated by Holladay et al.2 in their paper describing the equivalent K readings, the historical method should always be calculated for comparison if preoperative refractive data are available and patients should be counseled prior to surgery regarding the risk for a secondary procedure to optimize their refraction.

Most cataract surgery, however, is performed in patients who have not had prior refractive surgery. As stated in our paper, with improvements over the years in axial length measurement techniques, keratometry is an important source of potential biometry error. The Pentacam (Oculus) is able to measure many more points on the cornea than a conventional keratometer and can also image the posterior curvature. The hope for cataract surgeons is that, in the future, this technology may become applicable to routine cataract surgery, increasing the accuracy of biometry and reducing the risk for refractive surprises. The equivalent K is a helpful innovation as it allows Scheimpflug K values to be substituted into conventional IOL power prediction formulas. Ultimately, prediction formulas may be modified to incorporate more corneal parameters, as a result of developments in corneal imaging such as Scheimpflug. Anecdotally, we would comment that in the mostly elderly cataract population from which our study sample was derived, we sometimes had difficulty obtaining results from the Pentacam with the “OK” quality statement, even when measurements were repeated (although all the data included in the study were OK). This may partly relate to the relatively long time required to acquire the images (approximately 2 seconds for our device), and it has been suggested this may be relevant even when the OK quality specification is obtained.3 As the technology evolves, this is likely to produce increased accuracy for the mathematical algorithms based on the Scheimpflug measurements.—Richard J. Symes, MRCOphth, Paul G. Ursell, MD

REFERENCES

Role of angle kappa in patient dissatisfaction with refractive-design multifocal intraocular lenses

We would like to congratulate de Vries et al.1 for their retrospective study, which looked at multiple factors in patient dissatisfaction. The authors primarily evaluated 2 diffractive intraocular lens (IOL) models and noticed that residual ametropia and astigmatism, posterior capsule opacification, and large pupil were the 3 most significant etiologies in patient dissatisfaction.

In a recent prospective trial, we evaluated the visual acuity and quality-related satisfaction of patients with a refractive-design multifocal IOL and analyzed the factors that predicted dissatisfaction, including the role of angle kappa.2,3 A total of 50 eyes of 44 consecutive patients who had phacoemulsification with multifocal IOL implantation (Rezoom, Abbott Medical Optics, Inc.) were included. At 1 year, 37 patients (43 eyes) who completed the follow-up were asked to rate their unioocular symptoms on a graded questionnaire (scale of 0 to 5 [good to bad] for 5 queries). Using regression analysis, we found that the occurrence of halos was predicted by the degree of angle kappa and diminution in uncorrected distance visual acuity ($R^2 = 0.26, P = .029$); the occurrence of glare was predicted by the degree of angle kappa ($R^2 = 0.26, P = .033$).2

Multiple issues are involved in the consideration of angle kappa in multifocal IOL implantation. Because of factors such as capsule contraction, memory of the haptics, and IOL rotation, it seems unlikely that a multifocal IOL intentionally decentered kappa-centrically toward the visual axis would stay in the same position during the postoperative period. Donnenfeld and Holladay5 performed pupilloplasty to center the pupil and improve the waxy vision in such cases with high angle kappa. In recent years, we have been working on fibrin glue-assisted sutureless posterior chamber IOL implantation with intrascleral tuck (“glued IOL”).5 The IOL itself can be adjusted in the case of a glued IOL for aphakia by adjusting the amount of tucking, centering it according to the kappa angle.5 A feasibility study of this with a glued IOL is underway in our institution, and the results may throw more light on this evolving concept.
The perception of photic phenomenon is multifactorial, as evaluated in previous studies. Our study suggested there may be an additional role for misalignment between the visual and pupillary axes in the occurrence of photic phenomenon after multifocal IOL implantation. We believe the findings of de Vries et al.\(^1\) and of our group\(^2\) complement each other as the studies were done of diffractive-design and refractive-design multifocal IOLs, respectively.

**Gaurav Prakash, MD**
Amar Agarwal, MS, FRCS, FRCOphth
Dimple Rohit Prakash, MS
Dhivy Ashok Kumar, MD
Athiya Agarwal, MD, DO
Soosan Jacob, MS, DNB, FRCS
Chennai, India

**REFERENCES**


**OTHER CITED MATERIAL**


**REPLY:** We appreciate Prakash et al. pointing out another possible cause for dissatisfaction after implantation of a multifocal IOL. As demonstrated in our paper, decentration of the IOL with regard to the visual axis can severely diminish visual acuity and increase photic complaints such as glare and halos (Figure 1). Cases in our study also demonstrated that recentration of the multifocal IOL in the capsular bag can be successful in treating these complaints. Patients with a large angle kappa could be considered to have a decentered IOL relative to their visual axis even when the IOL is well-centered relative to the pupillary margin. Prakash et al. correctly point out that an intentional IOL decentration within the bag to compensate for the large angle kappa is unlikely to be successful due to capsule shrinkage. We look forward to the study reporting the predictability and long-term stability of intentionally decentered IOLs using the glued intrascleral fixation of IOLs, as previously described by Kumar et al.\(^1\)—Niels E. de Vries, MD, Rudy M.M.A. Nuijts, MD, PhD

**REFERENCE**


**Positioning patients who cannot lie flat**

I enjoyed the article by Lee et al.\(^1\) concerning performance of cataract surgery in patients who cannot lie flat. The authors did an excellent job describing a technique that I have also used on many occasions for patients who could not lie flat but could recline to approximately 45 degrees. I would add the following from my experience.

When the surgeon must stand to perform the procedure, and doing so is often necessary, it is helpful if an experienced technician operates the surgical microscope. The standing surgeon is obviously able to operate only 1 foot pedal at a time, and the procedure is greatly streamlined if attention is devoted to the phaco foot pedal only.
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