عنوان فارسی مقاله:
محاسبه قدرت لنز داخل چشمی پس از جراحی عیوب انکساری همراه با بروزرسانی کاربردی

عنوان انگلیسی مقاله:
Updated practical intraocular lens power calculation after refractive surgery

توجه!
این فایل تنها قسمتی از ترجمه می‌باشد. برای تهیه مقاله ترجمه شده کامل با فرمت ورد (قابل ویرایش) همراه با نسخه انگلیسی مقاله، اینجا کلیک کنید.
CONCLUSION

There are a multitude of methods to aid in accurate calculation of IOL power for cataract surgery in eyes previously treated with kerato-refractive surgery. Mounting evidence points to accurate, predictable refractive outcomes when methods that do not require prior refractive data are utilized. Well-established examples include the Shammas and Haigis-L methods, which do not rely on historical information, which may be inaccurate or unavailable.

There are three major sources of error in IOL power calculation. The instrument error stems from an inability of most keratometers to directly measure central corneal power. Most keratometers assume a constant index of refraction (1.3375) between the anterior and posterior corneal surfaces. This leads to error, as this relationship may be altered post-LVC. Finally, IOL formula errors stem from an inaccurate estimate of the ELP in eyes post-LVC. The Shammas and Haigis-L methods avoid this error, as they do not use the corneal radius to predict the ELP. Several instruments are available for keratometry and biometry, but many require formulas to adjust for prior LVC. The IOLMaster is one of the widely used instruments for IOL power calculation and is relatively reliable. More advanced techniques utilizing OCT, slit-scanning tomography or Scheimplug-based principles are likely to be more accurate in predicting refractive outcomes, as the posterior corneal curvature can be directly measured.

There are a multitude of methods to aid in accurate calculation of IOL power for cataract surgery in eyes previously treated with kerato-refractive surgery. Mounting evidence points to accurate, predictable refractive outcomes when methods that do not require prior refractive data are utilized. Well-established examples include the Shammas and Haigis-L methods, which do not rely on historical information, which may be inaccurate or unavailable. There are three major sources of error in IOL power calculation. The instrument error stems from an inability of most keratometers to directly measure central corneal power. Most keratometers assume a constant index of refraction (1.3375) between the anterior and posterior corneal surfaces. This leads to error, as this relationship may be altered post-LVC. Finally, IOL formula errors stem from an inaccurate estimate of the ELP in eyes post-LVC. The Shammas and Haigis-L methods avoid this error, as they do not use the corneal radius to predict the ELP. Several instruments are available for keratometry and biometry, but many require formulas to adjust for prior LVC. The IOLMaster is one of the widely used instruments for IOL power calculation and is relatively reliable. More advanced techniques utilizing OCT, slit-scanning tomography or Scheimplug-based principles are likely to be more accurate in predicting refractive outcomes, as the posterior corneal curvature can be directly measured.