

Commentary: Comparative analysis of quality of life in photorefractive keratectomy

Refractive errors are common vision problems that can be affected by genetic and environmental factors such as ethnicity, education, and work and outdoor activities.^[1,2] Traditional optical corrections (spectacles and contact lenses [CLs]) have some disadvantages, which have played a role in the trends of many people to find alternative corrections of their refractive errors, such as refractive surgery. Quality of life is a condition of well-being that has been introduced as one of the most significant criteria to assess health and physical, psychological, and social activities as well as subjects' satisfaction.^[3] Increasing attention to vision-related quality of life (VRQoL) in ophthalmology has led to the development of many instruments to assess QoL in the form of questionnaires.^[4] Refractive errors can decrease VRQoL, and many previous studies have reported that uncorrected refractive errors can negatively affect subjects' QoL as they can lead to an increased risk of falls, depression, and functional decline.

There are many ways to correct refractive errors, which broadly can be categorized as corneal-based procedures and intraocular lens based procedures. Among the corneal-based procedures, photorefractive keratectomy (PRK) is gaining popularity as it is a simple and flapless procedure. PRK is particularly promising for sports personnel and defense and police job aspirants. Compared to other corneal-based procedures, it has got its own drawbacks in the form of prolonged visual recovery time, postoperative haze, and increased higher-order aberration. However, PRK is making its way back with enhancements using intraoperative mitomycin C, Contura technique, and transepithelial PRK.

Walker and Wilson found that uncorrected visual acuity (UCVA) one week postoperatively was significantly better in laser *in situ* keratomileusis (LASIK) than in PRK.^[5] The studies comparing PRK and laser-assisted sub-epithelial keratectomy (LASEK) in terms of postoperative visual recovery showed that the two surgeries were comparable, with some studies reporting some benefits of LASEK over PRK.^[6] Shortt *et al.*^[7] in their study concluded that LASIK has faster visual recovery compared to PRK. Ganesh *et al.*^[8] in their study found superior quality of vision and patient satisfaction with lower induction of aberrations in patients who have undergone small-incision lenticule extraction (SMILE) in comparison to PRK.

In the present cross-sectional study, three different sets of subjects were compared using the QIRC questionnaire and it was concluded that VRQoL is better in the post-PRK group compared to the control group.^[9] The main drawback of the study is that it does not compare pre- and post-PRK improvement in quality of life in the same group; instead, it compares two different sets of subjects. The study has not taken into consideration the profession of the subjects in which they were involved. In this particular study, the method of epithelial removal during the procedure and any enhancements using mitomycin C were not mentioned, which significantly affects visual recovery and final visual outcome. The study only involves a subjective method of assessment whereas an objective assessment can also be included in future studies so as to assert the conclusion derived from the present study.

PRK is one of the corneal refractive procedures that has a definitive impact on VRQoL, especially in professions related to outdoor activity. As the technology is changing and more flapless procedures such as SMILE are being undertaken around the globe and have an obvious edge over PRK, further comparative studies are required in this regard involving larger samples along with improved questionnaires.

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