

# Bölüm

# 6

## Presbiyopi Düzeltici Göz İçi Lens Komplikasyonları

Bülent KÖSE<sup>1</sup>

### Giriş

Presbiyopi düzeltici göz içi lensler (GİL), uygun refraktif düzeltme sağlayarak katarakt ameliyatından sonra gözlüğe olan bağımlılığı azaltmayı amaçlamaktadır. Katarakt cerrahisi ile ilgili teknolojik gelişmelerin ardından günümüzde refraktif lens değişimi ve GİL implantasyonu oldukça güvenli bir prosedürdür. Fakoemülsifikasyon cerrahisi, tüm hastaların %94,3'ünün ameliyat sonrası iyi görme keskinliğine sahip olduğu güvenli ve etkili bir cerrahi yöntem olarak kabul edilmektedir (1). Bununla beraber, invaziv göz cerrahisinin getirdiği bazı riskleri de taşımaktadır. Ameliyat sonrası başarı, uygun hastanın dikkatli seçimi, GİL'lerin tasarımı ve görsel performansı hakkında bilgi, uygun cerrahi teknik ve olası komplikasyonların yönetimi ile ilgili yeterli donanımının olması gibi birçok faktörle ilişkilidir.

Takipler sırasında, presbiyopi düzeltici GİL'lerin etkinliğini azaltabilecek birçok postoperatif değişiklik ve komplikasyon bildirilmiştir. Bunlardan hasta memnuniyetsizliğine yol açan ve en sık karşılaşılan komplikasyonlar, ametropiye bağlı bulanık görme, arka kapsül opasifikasiyonu, kuru göz sendromu,

<sup>1</sup> Göz Hastalıkları Uzmanı, Özel Osmangazi Aritmi Hastanesi, drbulentkose@gmail.com

## KAYNAKÇA

1. Lundström, M., Barry, P., Henry, Y., Rosen, P., & Stenevi, U. (2013). Visual outcome of cataract surgery; study from the European Registry of Quality Outcomes for Cataract and Refractive Surgery. *Journal of Cataract & Refractive Surgery*, 39(5), 673-679.
2. Woodward, M. A., Randleman, J. B., & Stulting, R. D. (2009). Dissatisfaction after multifocal intraocular lens implantation. *Journal of Cataract & Refractive Surgery*, 35(6), 992-997.
3. de Vries, N. E., Webers, C. A., Touwslager, W. R., Bauer, N. J., de Brabander, J., Berendschot, T. T., & Nuijts, R. M. (2011). Dissatisfaction after implantation of multifocal intraocular lenses. *Journal of Cataract & Refractive Surgery*, 37(5), 859-865.
4. Zeng, M., Liu, Y., Liu, X., Yuan, Z., Luo, L., Xia, Y., & Zeng, Y. (2007). Aberration and contrast sensitivity comparison of aspherical and monofocal and multifocal intraocular lens eyes. *Clinical & experimental ophthalmology*, 35(4), 355-360.
5. Rodov, L., Reitblat, O., Levy, A., Assia, E. I., & Kleinmann, G. (2019). Visual outcomes and patient satisfaction for trifocal, extended depth of focus and monofocal intraocular lenses. *Journal of Refractive Surgery*, 35(7), 434-440.
6. Cillino S, Casuccio A, Di PF, et al. One-year outcomes with new-generation multifocal intraocular lenses. *Ophthalmology*. 2008;115:1508–16.
7. Carson, D., Hill, W. E., Hong, X., & Karakelle, M. (2014). Optical bench performance of AcrySof® IQ ReSTOR®, AT LISA® tri, and FineVision® intraocular lenses. *Clinical ophthalmology (Auckland, NZ)*, 8, 2105.
8. Rosen, E., Alió, J. L., Dick, H. B., Dell, S., & Slade, S. (2016). Efficacy and safety of multifocal intraocular lenses following cataract and refractive lens exchange: Metaanalysis of peer-reviewed publications. *Journal of Cataract & Refractive Surgery*, 42(2), 310-328.
9. Mamalis, N. (2021). Complications of multifocal intraocular lenses: What have we learned?. *Journal of Cataract & Refractive Surgery*, 47(10), 1256-1257.
10. Xu, Z., Cao, D., Chen, X., Wu, S., Wang, X., & Wu, Q. (2017). Comparison of clinical performance between trifocal and bifocal intraocular lenses: a meta-analysis. *PLoS One*, 12(10), e0186522.
11. Alio, J. L., Abdelghany, A. A., & Fernández-Buenaga, R. (2015). Enhancements after cataract surgery. *Current opinion in ophthalmology*, 26(1), 50-55.
12. Piñero, D. P., Espinosa, M. J. A., & Alió, J. L. (2010). LASIK outcomes following multifocal and monofocal intraocular lens implantation. *Journal of Refractive Surgery*, 26(8), 569-577.
13. Seiler, T. G., Wegner, A., Senfft, T., & Seiler, T. (2019). Dissatisfaction after trifocal IOL implantation and its improvement by selective wavefront-guided LASIK. *Journal of refractive surgery*, 35(6), 346-352.
14. Venter, J. A., Oberholster, A., Schallhorn, S. C., & Pelouskova, M. (2014). Piggyback intraocular lens implantation to correct pseudophakic refractive error after segmental multifocal intraocular lens implantation. *Journal of Refractive Surgery*, 30(4), 234-239.

15. Kamiya, K., Hayashi, K., Shimizu, K., Negishi, K., Sato, M., Bissen-Miyajima, H., ... & of Cataract, S. (2014). Multifocal intraocular lens explantation: a case series of 50 eyes. *American Journal of Ophthalmology*, 158(2), 215-220.
16. Biber JM, Sandoval HP, Trivedi RH, de Castro LE, French JW, Solomon KD. Comparison of the incidence and visual significance of posterior capsule opacification between multifocal spherical, monofocal spherical, and monofocal aspheric intraocular lenses. *J Cataract Refract Surg*. 2009;35(7):1234-1238.
17. Lundqvist B, Monestam E. Ten-year longitudinal visual function and Nd:YAG laser capsulotomy rates in patients less than 65 years at cataract surgery. *Am J Ophthalmol*. 2010;149(2):238-244.
18. Findl, O., Buehl, W., Bauer, P., & Sycha, T. (2010). Interventions for preventing posterior capsule opacification. *Cochrane database of systematic reviews*, (2).
19. Shah, V. C., Russo, C., Cannon, R., Davidson, R., & Taravella, M. J. (2010). Incidence of Nd: YAG capsulotomy after implantation of AcrySof multifocal and monofocal intraocular lenses: a case controlled study. *Journal of Refractive Surgery*, 26(8), 565-568.
20. Findl, O., Drexler, W., Menapace, R., Georgopoulos, M., Rainer, G., Hitzenberger, C. K., & Fercher, A. F. (1999). Changes in intraocular lens position after neodymium: YAG capsulotomy. *Journal of Cataract & Refractive Surgery*, 25(5), 659-662.
21. Hu, C. Y., Woung, L. C., Wang, M. C., & Jian, J. H. (2000). Influence of laser posterior capsulotomy on anterior chamber depth, refraction, and intraocular pressure. *Journal of Cataract & Refractive Surgery*, 26(8), 1183-1189.
22. Vrijman, V., van der Linden, J. W., Nieuwendaal, C. P., van der Meulen, I. J., Mourits, M. P., & Lapid-Gortzak, R. (2012). Effect of Nd: YAG laser capsulotomy on refraction in multifocal apodized diffractive pseudophakia. *Journal of Refractive Surgery*, 28(8), 545-551.
23. Eppig, T., Scholz, K., Löffler, A., Messner, A., & Langenbucher, A. (2009). Effect of decentration and tilt on the image quality of aspheric intraocular lens designs in a model eye. *Journal of Cataract & Refractive Surgery*, 35(6), 1091-1100.
24. Soda, M., & Yaguchi, S. (2012). Effect of decentration on the optical performance in multifocal intraocular lenses. *Ophthalmologica*, 227(4), 197-204.
25. Holladay, J. T., Piers, P. A., Koranyi, G., van der Mooren, M., & Norrby, N. S. (2002). A new intraocular lens design to reduce spherical aberration of pseudophakic eyes.
26. Ortiz, C., Esteve-Taboada, J. J., Belda-Salmerón, L., Monsálvez-Romín, D., & Domínguez-Vicent, A. (2016). Effect of decentration on the optical quality of two intraocular lenses. *Optometry and Vision Science*, 93(12), 1552-1559.
27. Zhu, X., He, W., Zhang, K., & Lu, Y. (2016). Factors influencing 1-year rotational stability of AcrySof Toric intraocular lenses. *British Journal of Ophthalmology*, 100(2), 263-268.
28. Zhu, X., He, W., Zhang, Y., Chen, M., Du, Y., & Lu, Y. (2018). Inferior decentration of multifocal intraocular lenses in myopic eyes. *American journal of ophthalmology*, 188, 1-8.
29. Hayashi, K., Hayashi, H., Nakao, F., & Hayashi, F. (2001). Correlation between pupillary size and intraocular lens decentration and visual acuity of a zonal-progressive multifocal lens and a monofocal lens. *Ophthalmology*, 108(11), 2011-2017.

30. Prakash, G., Prakash, D. R., Agarwal, A., Kumar, D. A., & Jacob, S. (2011). Predictive factor and kappa angle analysis for visual satisfactions in patients with multifocal IOL implantation. *Eye*, 25(9), 1187-1193.
31. Fu, Y., Kou, J., Chen, D., Wang, D., Zhao, Y., Hu, M., ... & Zhao, Y. E. (2019). Influence of angle kappa and angle alpha on visual quality after implantation of multifocal intraocular lenses. *Journal of Cataract & Refractive Surgery*, 45(9), 1258-1264.
32. Lee, D. H., Shin, S. C., & Joo, C. K. (2002). Effect of a capsular tension ring on intraocular lens decentration and tilting after cataract surgery. *Journal of Cataract & Refractive Surgery*, 28(5), 843-846.
33. Kim JH, Kim H, Joo CK. The effect of capsular tension ring on posterior capsular opacity in cataract surgery. *Korean J Ophthalmol*. 2005;19:23-8.
34. Alió, J. L., Plaza-Puche, A. B., & Piñero, D. P. (2012). Rotationally asymmetric multifocal IOL implantation with and without capsular tension ring: refractive and visual outcomes and intraocular optical performance. *Journal of Refractive Surgery*, 28(4), 253-258.
35. Koch, D. D., Samuelson, S. W., Villarreal, R., Haft, E. A., & Kohnen, T. (1996). Changes in pupil size induced by phacoemulsification and posterior chamber lens implantation: consequences for multifocal lenses. *Journal of Cataract & Refractive Surgery*, 22(5), 579-584.
36. Kawamorita, T., & Uozato, H. (2005). Modulation transfer function and pupil size in multifocal and monofocal intraocular lenses in vitro. *Journal of Cataract & Refractive Surgery*, 31(12), 2379-2385.
37. Alfonso, J. F., Fernández-Vega, L., Baamonde, M. B., & Montés-Micó, R. (2007). Correlation of pupil size with visual acuity and contrast sensitivity after implantation of an apodized diffractive intraocular lens. *Journal of Cataract & Refractive Surgery*, 33(3), 430-438.
38. Schein, O. D., Tielsch, J. M., Muñoz, B., Bandeen-Roche, K., & West, S. (1997). Relation between signs and symptoms of dry eye in the elderly: a population-based perspective. *Ophthalmology*, 104(9), 1395-1401.
39. Labetoulle, M., Rousseau, A., & Baudouin, C. (2019). Management of dry eye disease to optimize cataract surgery outcomes: Two tables for a daily clinical practice. *Journal français d'ophtalmologie*, 42(8), 907-912.
40. Donnenfeld, E. D., Solomon, R., Roberts, C. W., Wittpenn, J. R., McDonald, M. B., & Perry, H. D. (2010). Cyclosporine 0.05% to improve visual outcomes after multifocal intraocular lens implantation. *Journal of Cataract & Refractive Surgery*, 36(7), 1095-1100.
41. Braga-Mele, R., Chang, D., Dewey, S., Foster, G., Henderson, B. A., Hill, W., ... & ASCRS Cataract Clinical Committee. (2014). Multifocal intraocular lenses: relative indications and contraindications for implantation. *Journal of Cataract & Refractive Surgery*, 40(2), 313-322.