

Comparison of clinical outcomes of Eyecryl toric and Alcon toric intra-ocular lenses - A real world study

Abstract

Purpose: To compare the visual outcomes and residual astigmatism following implantation of Eyecryl toric versus Alcon AcrySof IQ toric intra-ocular lenses (IOLs).

Methods: This retrospective, observational study included 143 eyes of 141 patients who underwent phaco-emulsification, followed by implantation of Eyecryl toric IOL (n = 83 eyes) or Alcon toric IOL (n = 60 eyes) in an eye hospital in South India from 2018 to 2021. At 1 month post-op, the uncorrected distance visual acuity (UCVA), best corrected distance visual acuity (BCVA), and residual astigmatism of the toric IOL were compared and analyzed.

Results: The mean pre-op corneal astigmatism was 2.02 ± 0.81 D and 1.70 ± 0.68 D in the Alcon and Eyecryl groups, respectively (P = 0.005). The mean post-op corneal astigmatism at 1 month was 0.50 ± 0.51 D and 0.36 ± 0.42 D in the Alcon and Eyecryl groups, respectively, with no statistically significant difference between them (P = 0.87). The mean post-op UCVA in logarithm of minimum angle of resolution (logMAR) at 1 month was similar between the groups at 0.17 ± 0.18 and 0.17 ± 0.16 in the Alcon and Eyecryl groups, respectively (P = 0.98). The mean post-op BCVA in logMAR at 1 month was 0.06 ± 0.09 and 0.03 ± 0.10 in the Alcon and Eyecryl groups, respectively (P = 0.02).

Conclusion: Both Eyecryl toric and Alcon AcrySof IQ toric IOLs showed comparable post-operative outcomes in terms of UCVA and residual astigmatism. The post-op BCVA was clinically similar between groups but statistically better in the Eyecryl toric group.

Keywords: Astigmatism; IOL; phaco-emulsification; toric; visual acuity.

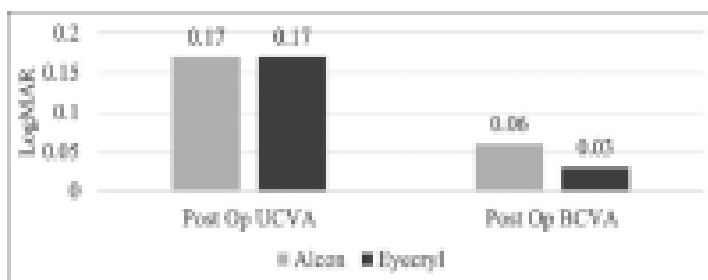


Figure 1 Comparison of pre-op BCVA and post-op UCVA between Alcon and Eyecryl toric IOLs

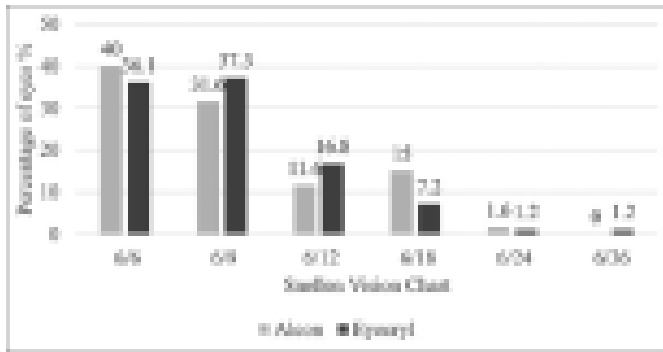


Figure 2 Comparison of post-op UCVA and post-op BCVA between Alcon and Eyecryl toric IOLs



Figure 3 Comparison of post-op UCVA between Alcon and Eyecryl toric IOLs

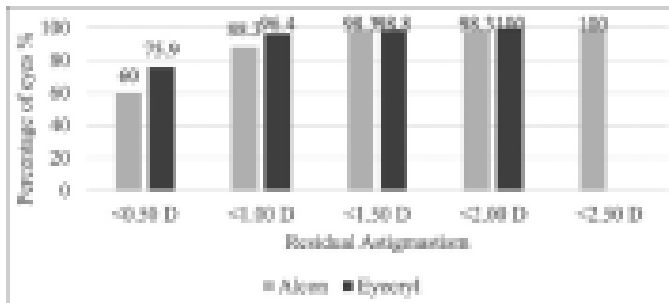


Figure 4 Comparison of pre-op and post-op astigmatism between Alcon and Eyecryl toric IOLs

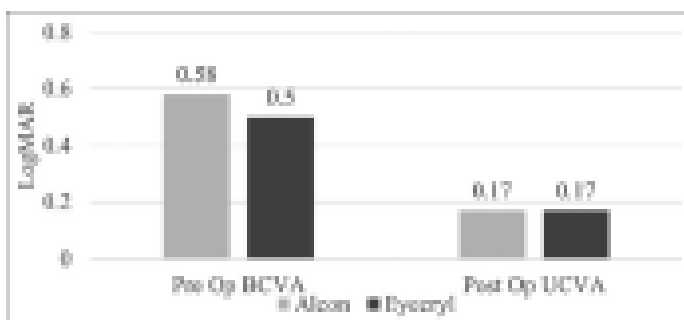


Figure 5 Comparison of percentage of eyes with residual astigmatism between Alcon and Eyecryl toric IOLs