



Comparison of Outcomes Between Ciliary Sulcus Placement of Single-Piece Foldable Acrylic (SPA) Intraocular Lenses and Three-Piece Intraocular Lenses following Posterior Capsular Rupture during Lens Extraction Surgery in a Tertiary Hospital in Manila, Philippines

Aramis B. Torrefranca Jr.,¹ Nilo Vincent DG Florcruz¹, Noel S. Carino¹, Richard C. Kho¹

¹ Department of Ophthalmology and Visual Sciences, University of the Philippines – Philippine General Hospital

Purpose: Successful intraocular lens (IOL) placement in cataract surgery is synonymous with the IOL being placed in the capsular bag. When the bag is violated, the ciliary sulcus becomes an option to be able to place an intraocular lens in a near in-the-bag position. Studies report that single piece foldable acrylic (SPA) IOLs are a poor choice for the sulcus. This study aims to compare the visual outcomes and complications between sulcus placement of single-piece intraocular lenses and three-piece intraocular lenses.

Methods: The medical records of all patients who underwent sulcus intraocular lens implantation were retrospectively reviewed in a single center.

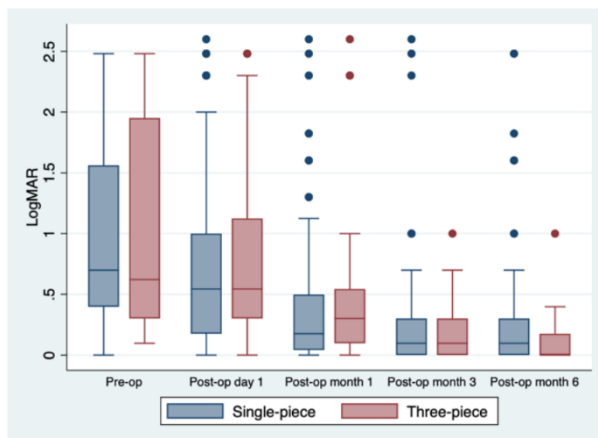


Figure 2. Comparison of LogMAR between single-piece and three-piece IOL across different time points.

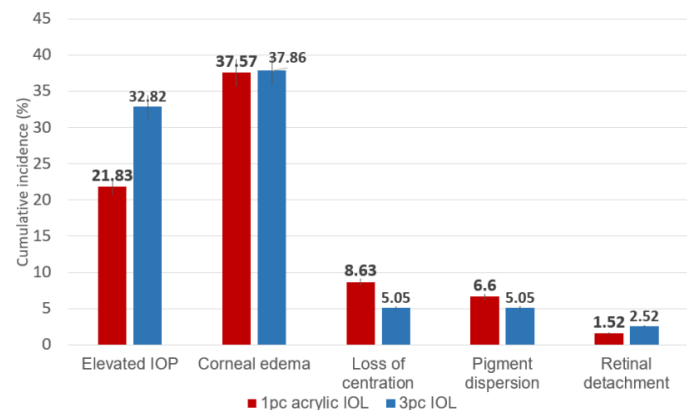


Figure 3. Cumulative incidences of the post-operative complications per intraocular group

Results: A total of 245 patients were included in the study, mean age of 61 with 54% were males and 46% were females. Majority of sulcus implantation occurred during phacoemulsification (87%). Around 82% (n = 202) were implanted with SPA IOLs and 18% (n = 43) were three-piece IOLs. Best corrected distance visual acuity (BCDVA) was 20/20 after 6 months for both groups. Comparison between two groups showed no superiority with each other. Complications were elevated IOP, corneal edema, loss of IOL centration, pigment dispersion and retinal detachment. Results showed more proportions of complications with SPA IOLs than 3-piece IOL. A higher proportion of early onset increase in pressure for SPA IOL was seen. Smaller optic diameter and overall length predispose to increase in decentrations.

Conclusions: In a cohort of 245 patients, we found no significant difference between the visual outcomes of three-piece IOLs with SPA IOLs. Complications were found to be more significant in SPA IOLs. Knowledge on the outcomes and complications of SPA IOLs would help ophthalmologists in their decision making and help set realistic expectations for both doctors and patients.