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Long Term Outcome of Pars Plana Vitrectomy and Sutured Scleral-Fixated Posterior Chamber Intraocular Lens Implantation or Repositioning

Gregg T. Kokame, Ryan T. Yanagihara, Jessica G. Shantha, Kyle N. Kaneko

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Abstract

Purpose: To assess the long-term stability of sutured scleral-fixated posterior chamber intraocular lenses (PC IOL) performed in combination with pars plana vitrectomy.

Design: Retrospective, consecutive**,** interventional case series

Methods: Retrospective single-surgeon study of 118 eyes of 111 patients seen at Retina Consultants of Hawaii, who underwent sutured scleral fixation of at least one haptic of a posterior chamber intraocular lens with 10-0 polypropylene combined with a pars plana vitrectomy. The fixation knot tying technique required two separate 10-0 polypropylene sutures tied into one combined knot – one suture closed the fixation sclerotomy and created the scleral fixation, and one suture looped together around the haptic of the PC IOL securing the haptic to the scleral fixation site. The primary outcomes were: position of the PCIOL at last follow-up, dislocation of either one or both haptics of the PCIOL, and breakage of the 10-0 polypropylene fixation suture.

Results: PCIOLs remained well stabilized and positioned at last follow-up in 116 of 118 eyes (98.3%) with a mean follow-up of 6.0 years. The maximum stable follow-up with two intact fixation sutures was 24.75 years. There were 4 cases of redislocation (3.4%), but 2 cases were due to unstable residual capsular support. There was one case of suture breakage in 214 fixation sutures (0.47%), and one case of haptic breakage.

Conclusions: Scleral fixation sutures with 10-0 polypropylene provide excellent long term fixation of PC IOLs with a less than 0.5% incidence of suture breakage and documented suture stability for up to over 24 years.