



# Trans-scleral posterior capsulorhexis in combined lens extraction and silicone oil removal

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## Abstract:

**Aim:** To study the safety and efficacy of posterior capsulorhexis in vitrectomized eyes undergoing combined phacoemulsification or irrigation/aspiration and silicone oil removal. **Methods:** This prospective non-randomized interventional study involved 115 silicone-filled eyes of 115 previously vitrectomized patients. All patients underwent combined phacoemulsification or underwent irrigation/aspiration and silicone oil removal, followed by foldable IOL implantation combined with primary posterior trans-scleral capsulorhexis. A 23-gauge trans-scleral vitrectomy probe was used to form the posterior capsulorhexis (vitrectorhexis). Patients were followed for 6 months. **Results:** IOLs maintained good centration in the capsular bag during and after trans-scleral posterior capsulorhexis. No complications were observed in the postoperative period regarding lens centration or size of the posterior capsulorhexis. No included eyes needed YAG laser posterior capsulotomy and no recurrent retinal detachment (RD) was reported during follow-up. **Conclusion:** Performing primary trans-scleral capsulorhexis in patients undergoing combined phacoemulsification, or irrigation/aspiration and silicone oil removal, enabled achievement of an early postoperative clear visual axis and prevented the onset of dense postoperative posterior capsular opacification in previously silicone-filled eyes. This technique is reproducible and may facilitate additional intraoperative procedures and uncomplicated postoperative follow-up of RD patients without requiring YAG laser capsulotomy.

## Keywords:

capsulorhexis, capsule, phacoemulsification, silicone oil

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