

# INPLASY

## Combined phacoemulsification and angle filtering procedures versus Phacoemulsification with Clinical Outcomes in Primary Glaucoma Coexisting with Cataracts: A Meta-Analysis of Randomized Controlled Trials

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### ADMINISTRATIVE INFORMATION

**Support** - 2021QH1216; 2024QH1289.

**Review Stage at time of this submission** - Completed but not published.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202650081

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 14 May 2026 and was last updated on 14 May 2026.

### INTRODUCTION

**Review question / Objective** To evaluate the clinical outcomes of Combined phacoemulsification and angle filtering procedures versus Phacoemulsification alone in patients with primary glaucoma coexisting with cataracts.

**Condition being studied** Glaucoma surgery is important because it may be the final way to save visual acuity.

### METHODS

**Participant or population** Patients diagnosed with primary open-angle glaucoma, angle-closure glaucoma, or primary angle-closure.

**Intervention** Studies comparing surgical techniques, including Combined phacoemulsification and angle filtering procedures as the experimental group.

**Comparator** Phacoemulsification as the control group.

**Study designs to be included** Randomized clinical trials only.

**Eligibility criteria** Inclusion criteria: (1) patients diagnosed with primary open-angle glaucoma, angle-closure glaucoma, or primary angle-closure; (2) Studies comparing surgical techniques, including Combined phacoemulsification and angle filtering procedures as the experimental group and Phacoemulsification as the control group; (3) clinical outcomes including IOP, AGMs, complications, BCVA, and perimetry; (4) randomized controlled trials only.

Exclusion criteria: (1) articles that did not involve Trabeculectomy and Phacoemulsification; (2) articles with data merged from a published search by the same research team; (3) Studies including other types of glaucoma, such as secondary glaucoma, traumatic glaucoma, or congenital glaucoma.

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**Information sources** PubMed/ Medline, Embase, and CochraneLibrary.

**Main outcome(s)** Intraocular pressure (IOP), anti-glaucoma medications (AGMs), best-corrected visual acuity (BCVA), perimetry, and complications.

**Quality assessment / Risk of bias analysis** Revman 5.0 quality assessment tool.

**Strategy of data synthesis** IOP, AGMs, BCVA, and perimetry outcomes were presented as mean difference (MD). Complications are presented as risk ratios (RR). A random-effect model was used in this analysis. Heterogeneity between studies was assessed using statistics, and subgroup analysis was used to minimize heterogeneity. The confidence interval (CI) was 95%. Publication bias was evaluated using Revman funnel plots. A p-value of <0.05 was considered statistically significant. All data analysis was conducted by Revman 5.0.

**Subgroup analysis** follow-up times. PACG vs POAG. MMC vs not use MMC. ab interno vs ab externo.

**Sensitivity analysis** Publication bias was assessed using funnel plots.

**Country(ies) involved** China.

**Keywords** Phacotrabeculectomy, Phacoemulsification, glaucoma, cataract, meta-analysis.

#### **Contributions of each author**

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