

INPLASY

INPLASY202690055
doi: 10.37766/inplasy2026.9.0055
Received: 13 September 2026
Published: 13 September 2026

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Functional outcomes of internal limiting membrane peeling versus no peeling during vitrectomy for epiretinal membrane: a systematic review and 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: INPLASY202690055
Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 13 September 2026 and was last updated on 13 September 2026.

INTRODUCTION

Review question / Objective Compare ERM+ILM VS ERM only in clinical outcomes. Data of studies list: best-corrected visual acuity (BCVA), central retinal thickness (CMT), microscotomas, metamorphopsia-charts scores, retinal sensitivity, fixation stability, complications rate, and recurrence rate.

Condition being studied PPV, dye used in macular pucker, clinical outcomes.

METHODS

Participant or population Only macular pucker patient who need PPV.
Intervention ERM+ILM.
Comparator ERM only.

Study designs to be included Randomized clinical trials only.

Eligibility criteria 1. Randomized controlled trials only. 2. Clinical outcomes of ERM and ILM peeling compared with only ERM peeling. 3. Follow-up range up to 12 months.
Exclusion criteria:
1. Clinical outcomes that can not to be evaluated.
2. Only abstracts. 3. Duplicated studies.

Information sources PubMed,Embase, Web of sciece,etc.

Main outcome(s) Best-corrected visual acuity (BCVA), central retinal thickness (CMT), microscotomas, metamorphopsia-charts scores, retinal sensitivity, fixation stability, complications rate, and recurrence rate..

Quality assessment / Risk of bias analysis Cochrane Risk of Bias 2.0 (RoB 2)tool.

Strategy of data synthesis We used RevMan Web (Cochrane, 2024) exclusively as a data-entry and visualization platform to construct the risk-of-bias summary figures and funnel plots; the software did not perform any automated judgment of study quality. Two reviewers independently pilot-tested the tool on three randomly selected studies to calibrate their interpretations. The inter-rater reliability (Cohen's kappa) for the overall risk-of-bias judgments was 0.86 (95% CI: 0.78–0.94), indicating near-perfect agreement. Disagreements on individual signaling questions were resolved through consensus discussion with a third reviewer.

Funnel plots and Egger's tests were performed only when at least 10 independent studies contributed to a given synthesis. Publication bias was not assessed for subgroup or time-point analyses with fewer than 10 studies, because funnel-plot interpretation and Egger's test are unreliable in this setting. Each study contributed only one independent effect estimate; for repeated time-point data, the longest follow-up was used.

Subgroup analysis Follow up time; dye using.

Sensitivity analysis Funnel plots and Egger's tests were only considered for syntheses with at least 10 independent studies. For subgroup analyses and time-point-specific analyses with fewer than 10 studies, publication bias was not assessed, because funnel plots and Egger's tests are unreliable in this setting. Where repeated time-point data from the same study were present, we retained only one time point per study (the longest available follow-up) in the primary analysis, so that each study contributed only one independent effect estimate.

Country(ies) involved China.

Keywords Phacotrabeculectomy, Phaco-emulsification, glaucoma, cataract, meta-analysis.

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