**Search strategy. Supplementary file**

**PICO format**

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| --- | --- | --- |
| **Synonyms** | **Keywords** |  |
| “Retinal tear” OR “giant retinal tear” OR “Retinal detachment” OR “GRT” | Giant retinal tear | Population/disease |
| “Surgery” OR “retinal surgery” OR “pars plana vitrectomy” OR “PPV” | Pars plana Vitrectomy | Intervention |
| “Scleral buckle” OR “SB”AND “pneumatic retinopexy” OR PnR | Scleral buckling, pneumatic retinopexy | Comparison |
| “Visual acuity” OR “anatomical success” OR “cataract” OR “proliferative vitreoretinopathy” OR “recurrent retinal detachment | Postoperative outcome | Outcome/Consequences |

**MEDLINE Ovid search strategy**

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| --- | --- | --- |
| **S.No** | **Keywords** | **Results** |
| 1. | \*exp Retinal Detachment/ OR exp Retinal tears OR giant retinal tear/ OR RRD/ OR (retin\* adj3 break\*).tw. OR (retin\* adj3 tear\*).tw. | 8539 |
| 2 | exp Retinal Perforations/ OR exp Vitreous Detachment/ OR (retin\* adj3 detach\*).tw. OR (retin\* adj3 perforat\*).tw. | 28212 |
| 3 | 1 AND 2 | 7433 |
| 4. | surgery.fs OR Surgery OR Retinal Surgery OR Vitreoretinal Surgery | 3086320 |
| 5. | exp Vitrectomy/ or vitrect\*.tw. or PPV\*.tw. or vitre\* surg\*.tw. or pars plana vitrectomy.mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word] | 49162 |
| 6. | 4 OR 5 | 3112185 |
| 7. | 3 AND 6 | 5594 |
| 8. | Scleral Buckling.mp. or SB.mp. or scleral buckle.mp. OR pneumatic retinopexy OR PnR | 36034 |
| 9. | 4 OR 8 | 3117160 |
| 10. | 3 AND 9 | 5369 |
| 11. | 7 AND 10 | 5333 |
| 12 | limit 11 to (yr="2000 -Current" and ("all adult (19 plus years)" or "young adult (19 to 24 years)" or "adult (19 to 44 years)" or "young adult and adult (19-24 and 19-44)" or "middle age (45 to 64 years)" or "middle aged (45 plus years)" or "all aged (65 and over)") and (case reports or classical article or clinical conference or clinical study or clinical trial, all or clinical trial, phase i or clinical trial, phase ii or clinical trial, phase iii or clinical trial, phase iv or clinical trial protocol or clinical trial or comparative study or controlled clinical trial or journal article or observational study or preprint or randomized controlled trial)) | 2612 |

**PubMed search strategy**

1. (surgery[tiab]) OR (trial[tiab]) OR (groups[tiab]))
2. (retina\*[tw] AND (break\*[tw] OR tear\*[tw] OR detach\*[tw] OR perforat\*[tw])) OR vitreoretinopath\*[tw]
3. (vitrec\*[tw] OR PPV\*[tw] OR Pars Plana[tw])
4. 1 AND 2 AND 3 (6581)
5. Scleral buckling\* OR SB
6. 1 AND 2 AND 5 (1,995)
7. Pneumatic retinopexy OR PnR
8. 1 OR 2 OR 7 (177)
9. 4 AND 6 AND 8 (82)
10. 4 OR 6 OR 8 (7,539)

### Filters applied: Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Clinical Trial Protocol, Clinical Trial, Phase I, Clinical Trial, Phase II, Clinical Trial, Phase III, Clinical Trial, Phase IV, Comparative Study, Controlled Clinical Trial, Observational Study, Preprint, Randomized Controlled Trial, Humans, Adult: 19+ years, Young Adult: 19-24 years, Adult: 19-44 years, Middle Aged + Aged: 45+ years, Middle Aged: 45-64 years, Aged: 65+ years, from 2000/1/1 - 2023/10/6. 1,492

**ClinicalTrials.gov search strategy.** 2/10 studies

retina OR retinal tear OR retinal detachment OR GRT OR giant retinal tear AND vitrectomy OR PPV OR Scleral buckling OR Sb OR PnR OR pneumatic retinopexy OR "vitreous surgery" OR vitreoretinal surgery