# Long term outcomes of combined pars plana vitrectomy with placement of anterior chamber intraocular lens versus glued posterior chamber intraocular lens

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# Disclosures

- I have no financial disclosures.

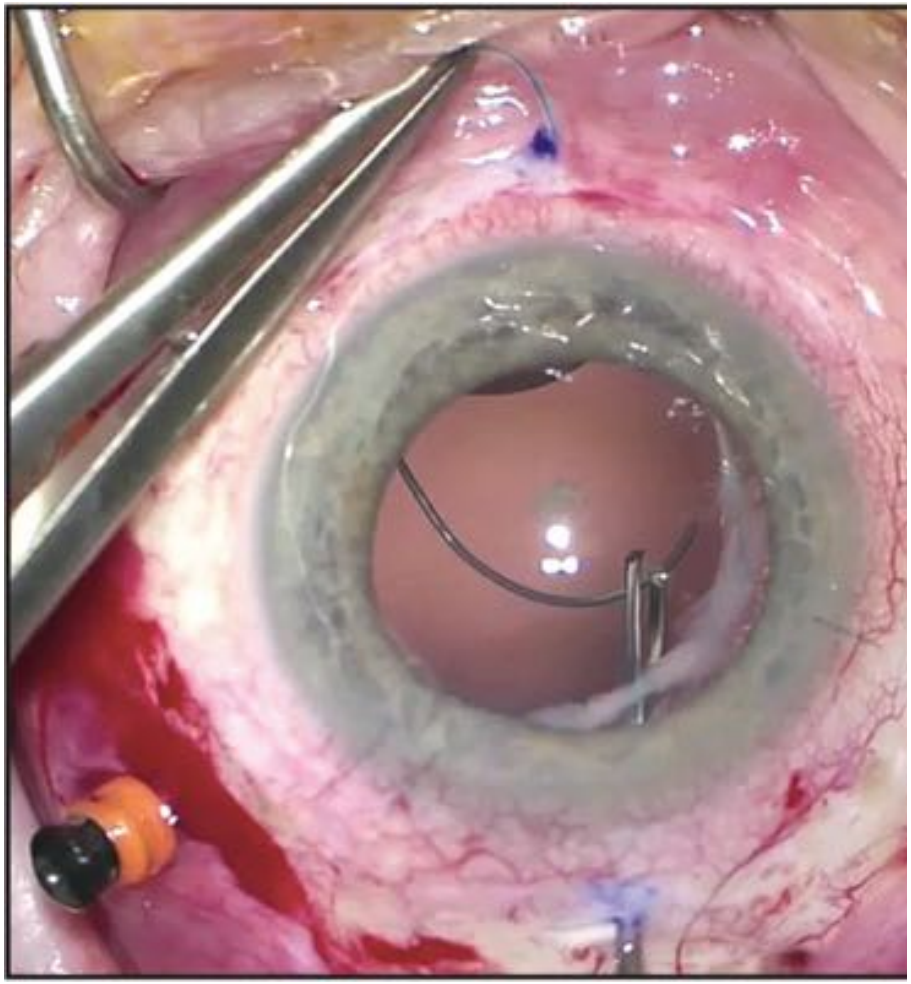
# Summary

- Posteriorly subluxed lenses often require vitrectomy with IOL exchange and/or IOL fixation.
- Retrospective study at UIowa of outcomes of PPV with ACIOL vs scleral fixated IOL (median 120 weeks follow-up).
- Anterior chamber lenses and scleral fixated posterior chamber lenses have similar long-term complication profiles.
- Combined surgery with either lens technique results in similar improvements in vision.

# Objective

- To evaluate long term clinical outcomes in patients with combined pars plana vitrectomy (PPV) with placement of anterior chamber intraocular lens (ACIOL) versus posterior chamber fibrin glue-assisted intraocular lens.


EyeRou



# Methods

- **Retrospective review** of patients who underwent PPV with concomitant placement of either anterior chamber or fibrin glued posterior chamber lens (PCIOL) at the University of Iowa from 2000-2018.
- **Patients with <32 weeks of follow up were excluded**.
- Detailed pre-, intra-, and post-operative complications were analyzed using mixed model univariate analysis.
- **Post-operative complications analyzed included: lens subluxation, uveitis-glaucoma-hyphema syndrome, corneal decompensation, hyphema, glaucoma, cystoid macular edema, vitreous hemorrhage, epiretinal membrane and retinal detachment**.

# Baseline Demographics

| | Fibrin Glued IOL | ACIOL | p value |
|---|---|---|---|
| **Number of patients** | **13** | **12** | **--** |
| **Mean age (range)** | **54.6 (19-83)** | **70.4 (27-92)** | **0.03*** |
| **Sex** | **2 Females** | **5 Females** | **0.28** |
| **Mean follow-up (weeks)** | **142.2** | **192.8** | **0.25** |
| **Mean preop VA (logMAR)** | **20/134** | **20/587** | **0.07** |
| **Co-morbidities** | | | **0.35** |
| Glaucoma | 3 | 3 | |
| Myopia | 1 | 1 | |
| Uveitis | 1 | 1 | |
| Type II Diabetes | 2 | 0 | |
| AMD | 0 | 3 | |
| ERM | 1 | 2 | |
| CME | 0 | 1 | |
| Retinal detachment | 6 | 6 | |

* Indicates statistical significance

# Baseline Characteristics

| | Fibrin glued IOL | ACIOL |
|---|---|---|
| **Surgical indications** | | |
| Trauma | 1 | 0 |
| Subluxed intraocular lens | 5 | 7 |
| Subluxed crystalline lens | 2 | 0 |
| Capsular tear/rupture | 1 | 3 |
| IOL exchange | 1 | 0 |
| Aphakia | 3 | 1 |
| Phacodonesis | 0 | 1 |

# Complications

| Complications | | Fibrin Glued IOL | ACIOL | p value |
|---|---|---|---|---|
| **Intra-operative** | Suprachoroidal hemorrhage | 0 | 0 | 0.98 |
| | Choroidal detachment | 0 | 0 | 0.98 |
| **Post-operative** | Suprachoroidal hemorrhage | 0 | 2 | 0.50 |
| | Choroidal detachment | 0 | 0 | 0.98 |
| | Unstable IOL | 2 | 2 | 0.98 |
| | Glaucoma | 0 | 0 | 0.74 |
| | UGH | 0 | 0 | 0.98 |
| | Corneal decompenstion | 4 | 3 | 0.93 |
| | Retinal detachment | 0 | 0 | 0.98 |
| | CME | 1 | 6 | 0.08 |
| | ERM | 1 | 2 | 0.73 |
| | VH | 2 | 2 | 0.98 |
| | Hyphema | 0 | 0 | 0.98 |
| | | | | |

# Visual Outcomes

| | Fibrin Glued IOL | ACIOL | p value |
|---|---|---|---|
| Mean pre-op visual acuity (Snellen) | 20/134 | 20/587 | 0.07 |
| Mean final post-op visual acuity (Snellen) | 20/90 | 20/341 | 0.15 |
| Mean change in visual acuity (logMAR ) | -0.28 +/- 0.37 | -0.24 +/- 0.63 | 0.47 |

# Conclusions

- Anterior chamber lenses and scleral fixated posterior chamber lenses with combined vitrectomy have similar long-term complication profiles.
- Combined surgery with either lens technique results in similar improvements in vision.