

Supplementary Online Content

Husain R, Do T, Lai J, et al. Efficacy of phacoemulsification alone vs phacoemulsification with goniosynechialysis in patients with primary angle-closure disease: a randomized clinical trial. *JAMA Ophthalmol*. Published online July 11, 2019. doi:10.1001/jamaophthalmol.2019.2493

eMethods. Detailed Methods

eTable 1. Cox Regression Analysis for Predictors of Failure

eTable 2. Baseline Patient Characteristics for Singapore and Vietnam Subjects Who Underwent Phacoemulsification Alone

This supplementary material has been provided by the authors to give readers additional information about their work.

eMethods. Detailed Methods

Inclusion and exclusion criteria

The inclusion criteria were:

1. Age \geq 30 years
2. Diagnosis of PACD.
3. More than or equal to 90 degrees of PAS (not necessarily contiguous) .
4. IOP $>$ 21 mmHg if untreated or \leq 21 mmHg on topical medication
5. Lens opacity deemed sufficient to be causing decreased vision in the opinion of the operating surgeon.
6. Written informed consent

The exclusion criteria were:

1. Previous intraocular surgery (except laser iridotomy was allowed)
2. Previous eye trauma
3. For patients on warfarin, INR $>$ 3.0 on day of surgery
4. Evidence of moderate non-proliferative diabetic retinopathy, neovascularization, or rubeosis iridis
5. Chronic use of topical or systemic steroids
6. Only eye (visual acuity worse than 6/60 Snellen in non-study eye)
7. Advanced glaucoma with severe visual field (VF) defect, defined as visual field deficit threatening fixation.

All subjects underwent baseline and subsequent follow-up evaluation in a standardized manner that included an assessment of visual acuity using a logarithm of minimum angle of resolution chart (Lighthouse Inc., Long Island, NY, USA), slitlamp examination, stereoscopic evaluation of the optic disc, visual fields (Humphrey Visual Field Analyser, Carl-Zeiss Meditec, Dublin, CA, USA) and IOP measurement with Goldmann applanation tonometry (Haag-Streit, Koniz, Switzerland). Gonioscopy was performed by an experienced examiner in the dark using a Goldmann 2-mirror lens at \times 16 magnification. Indentation

gonioscopy was carried out using a Sussman 4-mirror lens (Ocular Instruments Inc., Bellevue, WA, USA) to establish the presence and degree of PAS. Depending on availability at the different sites, some subjects also underwent anterior-segment optical coherence tomography (AS-OCT, Carl-Zeiss Meditec, Dublin, CA, USA) and corneal specular microscopy (Topcon SP-200P, Newbury, UK).

| eTable 1: Cox regression analysis for predictors of failure (defined as intraocular pressure (IOP) >21mmHg and a decrease in IOP of < 20% of baseline IOP) | | |
|--|-------------------------------------|----------------|
| | HR (95% confidence interval) | p-value |
| Group | | |
| PEI | Reference | 0.83 |
| PEI-GSL | 0.93 (0.48, 1.80) | |
| Sites | | |
| Singapore | Reference | |
| Thailand | 0.90 (0.32, 2.55) | 0.84 |
| Hong Kong | 0.77 (0.21, 2.88) | 0.69 |
| Vietnam | 0.42 (0.15, 1.21) | 0.11 |
| Diagnosis | | |
| PAC | Reference | |
| PACG | 1.21 (0.59, 2.50) | 0.61 |
| Baseline intraocular pressure | 0.93 (0.87, 0.99) | 0.02 |
| Baseline PAS | 1.01 (0.87, 1.16) | 0.91 |
| PEI: Phacoemulsification; PEI-GSL: Phacoemulsification- goniosynechialysis; PAC: primary angle closure; PACG: primary angle closure glaucoma; PAS: peripheral anterior synechiae | | |

| Table 2: Baseline patient characteristics for Singapore and Vietnam subjects who underwent phacoemulsification alone | | | |
|---|------------------|----------------|--|
| | Singapore | Vietnam | Mean difference (95% confidence interval) |
| Number of eyes | 15 | 15 | |
| Mean Age (SD) | 67.3±6.8 | 69.3±10.1 | -1.9 (-8.4, 4.5) |
| Males: Females | 4:11 | 4:11 | |
| Mean BCVA (LogMar) | 0.34±0.24 | 0.62±0.22 | -0.28 (-0.52, -0.04) |
| Baseline IOP mm Hg | 18.0±7.8 | 27.4±3.7 | -9.4 (-13.9, -5.0) |
| Number of medications | 2.2±0.86 | 2.0±0.0 | 0.2 (-0.3, 0.7) |
| Mean Shaffer | 1.28±0.57 | 0.53±0.63 | 0.75 (0.30, 1.19) |
| PAS (Clock Hours) | 5.9±2.31 | 7.3±2.8 | -1.4 (-3.3, 0.54) |
| PAC:PACG | 9:6 | 0:15 | |
| Axial length | 23.04 ± 1.03 | 22.47 ± 0.76 | 0.57 (-0.12, 1.26) |
| Anterior chamber depth | 2.42±0.30 | 1.85±0.13 | 0.56 (0.39, 0.74) |
| Central corneal thickness | 538.6±39.3 | 528.3±44.5 | 10.3 (-25.3, 45.8) |
| Endothelial cell count cells/mm ² | 2502.4±296.9 | 2480.0±258.3 | 22.4 (-204.9, 249.6) |
| Mean Deviation | - 11.5±7.5 | - 12.9±7.1 | 1.45 (-6.2, 9.0) |
| SD-Standard deviation; BCVA – Best corrected visual acuity; PAC/PACG – Primary angle closure/ PAC glaucoma; IOP- Intraocular pressure; PAS- Peripheral anterior synechiae | | | |