



ELDERLY PATIENTS WITH RETINAL DETACHMENT: CLINICAL CHARACTERISTICS AND COMPARATIVE SURGICAL OUTCOMES IN A MULTICENTER STUDY



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Summary

- Older adults are growing segments of the world population, but little is known about the characteristics and outcomes of rhegmatogenous retinal detachment (RRD) in this age group.
- We examined 2144 patients with RRD, and compared older adults (80 or older) to younger patients.
- Older adults presented with more macula-involving RRD ($P < 0.001$) and more proliferative vitreoretinopathy ($P = 0.02$).
- Single surgery success and visual outcomes were worse compared to younger patients.
- Vitrectomy + scleral buckle had better outcomes compared to vitrectomy alone.





Case Example

- 83 year old woman
- Pseudophakic total rhegmatogenous retinal detachment (RRD)



ASRS Image Bank, Jason Calhoun



Case Example

- Duration unclear, lives in a nursing home
- Has back issues and may not be able to position



ASRS Image Bank, Jason Calhoun

**1. Have RRDs in elderly patients
been characterized well?**

**2. What are the best ways to
repair the RRDs?**



Study Rational

- The number of older Americans will double by 2050
- Population of those in 80s and 90s will increase from 9,300,000 in 2000 to 19,500,000 in 2030
- By age of 85, there maybe a 3% lifetime risk of RRD
- Unique considerations:
 - Not well characterized, especially 80 and older
 - Anesthesia risks
 - Medical co-morbidities
 - Post-operative positioning difficulties



Study Design

- Post-hoc analysis of the Primary Retinal Detachment Outcomes (PRO) study
- Consecutive patients with primary RRD in 2015 from 6 centers
- Compared 40-79 year olds vs 80+ (2 SD from the mean)
- Primary outcome: single surgery anatomic success (SSAS)



- Samir Patel, MD
- Wills Retina Fellow



Results: Demographics

- 2144 cases included
- Mean age 62 (range 40-91)
- Older (80+) patients were more likely to be:
 - Female (48% vs 35%, $P = 0.02$)
 - Diabetic (22 vs 12%, $P < 0.001$)
 - Without family history of RRD (2% vs 9%, $P = 0.008$)



Results: Ocular Characteristics

- Older adults more likely to:
 - Be pseudophakic (89% vs 44%, $P < 0.001$)
 - Have prior vitrectomy for other pathologies (7% vs 2%, $P = 0.002$)
 - Have a history of intravitreal injections (7% vs 1%, $P = 0.002$)
 - Have a history of age-related macular degeneration (17% vs 2%, $P < 0.001$)
 - Have less lattice degeneration (7% vs 23%, $P < 0.001$)



Results: RD Characteristics

- Older adults more likely to present with:
 - Worse vision (20/500 vs 20/200, $P < 0.001$)
 - Macula-off detachments (67% vs 49%, $P < 0.001$)
 - PVR (12% vs 7%, $P = 0.02$)
 - Larger RRDs (6.0 clock hours vs 5.1, $P < 0.001$)



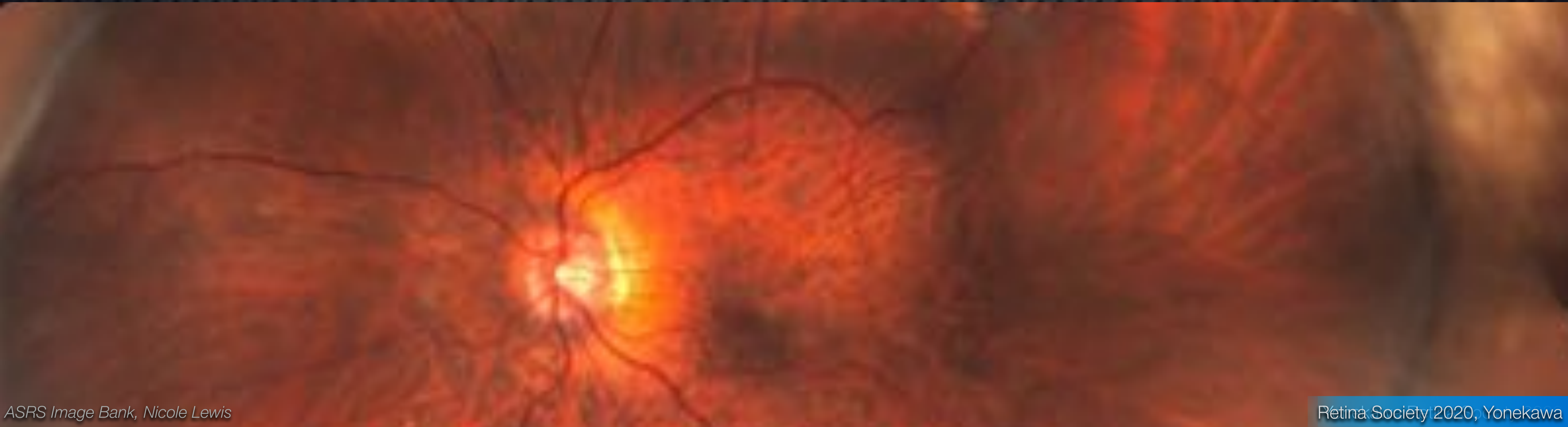
Results: Intraoperative

- Older adults were more likely to:
 - Receive silicone oil tamponade (10% vs 4%, $P < 0.001$)
 - Receive perfluorocarbon liquid (18% vs 13%, $P = 0.04$)
 - Require PVR peeling (10% vs 5%, $P = 0.009$)
 - Require simultaneous ERM peeling (9% vs 5%, $P = 0.04$)



Results: Anatomic Outcomes

- Older adults, compared to younger patients, had:
 - Had worse single surgery success (78% vs 84%, $P = 0.03$)
 - Buckle-vitrectomies had better single surgery success compared to vitrectomy alone (74% vs 91%, $P = 0.03$)
 - More likely to have persistent silicone oil at the end of followup (13% vs 4%, $P < 0.01$)
 - Multivariate regression models showed that SB/PPV was predictive of higher single surgery success, while requiring ERM peeling was predictive of worse SSAS.



Results: Visual Outcomes

- Older adults, compared to younger patients, had:
 - Had worse final visual acuity (20/125 vs 20/50, $P < 0.001$)
 - PPV had worse visual outcomes compared to PPV/SB (20/160 vs 20/63, $P = 0.03$)
 - Multivariate regression models showed that PPV/SB predicted better visual outcomes ($P = 0.03$) while pre-operative PVR ($P = 0.035$) and silicone oil requirement ($P = 0.013$) were predictive of poorer outcomes.



Important Findings


1. Older adults are more likely to present with macula-off RRD with PVR.
2. Majority underwent primary PPV, but PPV/SB had significantly better anatomic and visual outcomes.



Discussion

- We will be treating more elderly patients going forward
- Will more likely present with more complex RRDs
- Will likely have more perioperative social and medical issues that may limit effectiveness of routine management
- Consider SB/PPV





thank
you

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