Long-Term Re-Detachment Rates of Pneumatic Retinopexy versus Pars Plana Vitrectomy in Retinal Detachment: a PIVOT Post-Hoc Analysis

Yasmin Motekalem¹, MD Candidate, Tugche S Chen², MD Candidate, Isabela Martins Melo³, MD, Roxane J Hillier⁴ MD, Alan R. Berger³, MD, Louis R. Giavedoni³, MD, David T. Wong³, MD, Filberto Altomare³, MD, Rajeev H. Muni MD, MSc

¹Department of Physiology, Western University
²Royal College of Surgeons in Ireland
³Department of Ophthalmology and Vision Sciences, University of Toronto, Toronto, Ontario, Canada ⁴Newcastle Eye Centre, Royal Victoria Infirmary, Newcastle upon Tyne, United Kingdom

Introduction: The purpose of our study was to assess long-term re-detachment rates following pneumatic retinopexy (PnR) versus pars plana vitrectomy (PPV) in rhegmatogenous retinal detachments (RRD).

Methods: “Conducted post-hoc analysis of the “PnR versus PPV for the Management of Primary RRD Outcomes Randomized Trial” (PIVOT) trial. PIVOT participants were ineligible if any re-intervention to reattach the retina was performed within one year of the initial procedure. Re-detachment was determined by medical chart review or telephone interview. The latter was the only accepted method for those with less than two years of follow-up (otherwise marked as unreachable and excluded).

Results: After exclusion of ineligible and unreachable participants from the PIVOT trial, 61 (72.6%) PPV participants and 62 (80.5%) PnR participants were analyzed by either chart review or phone call. Long term re-detachment rate was 0% and 1.61% (1/62) in the PPV and PnR groups respectively (p= 0.32). The mean follow-up duration in years was 4.34+/−2.80 versus 4.26+/−2.81 in the PPV and PnR groups, respectively.

Conclusion: There was no statistically significant difference in long-term re-detachment rates for PnR vs PPV. Both procedures are durable treatment options for RRD over an extended period, rarely requiring additional intervention for re-detachment.