

CLOSURE OF LARGE MACULAR HOLE AND RESOLUTION OF PIGMENT EPITHELIUM  
DETACHMENT WITH AUTOLOGOUS RETINAL TRANSPLANT

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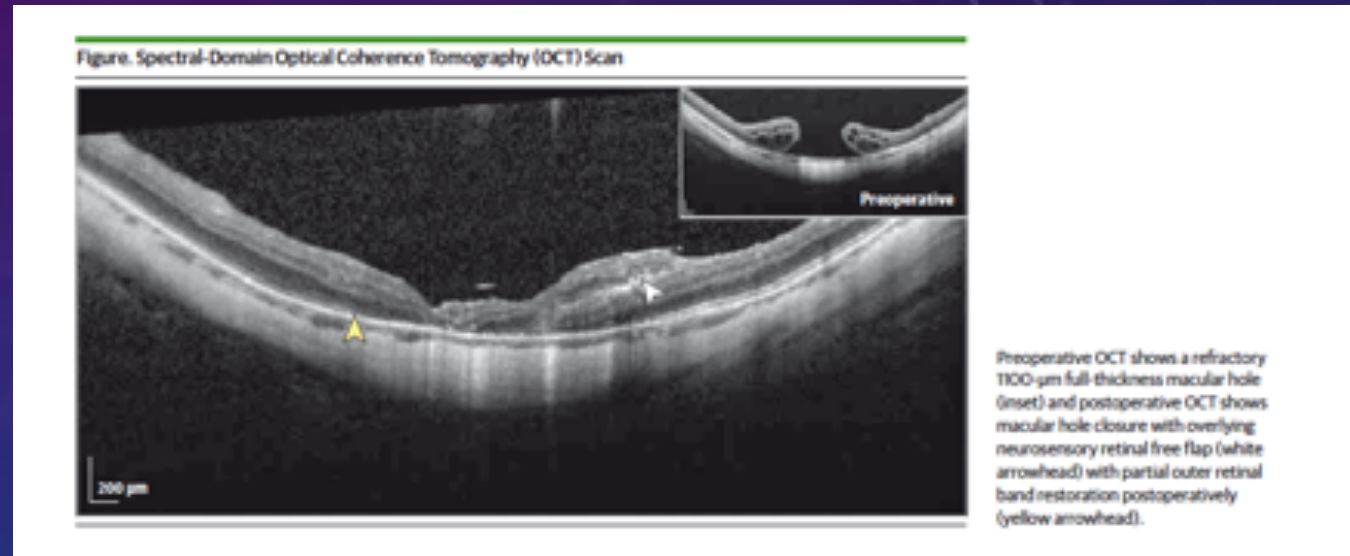
# RELEVANT DISCLOSURES

- JS: Consultant for Alcon
- All other authors report no relevant financial disclosures



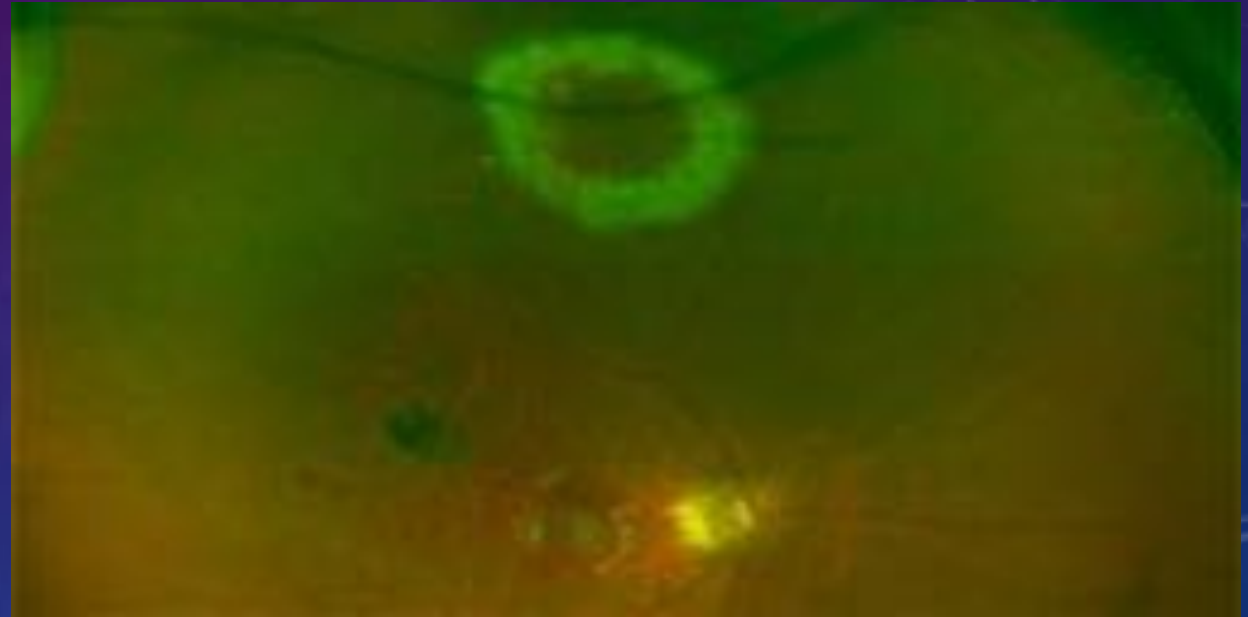
# INTRODUCTION

- Several techniques for chronic large macular holes that do not close with traditional technique (vitrectomy/ILM peel/gas tamponade) have been proposed
- Autologous retinal transplant first described by Grewal and Mahmoud (2016)
- Technique has evolved to using a ‘staged’ approach



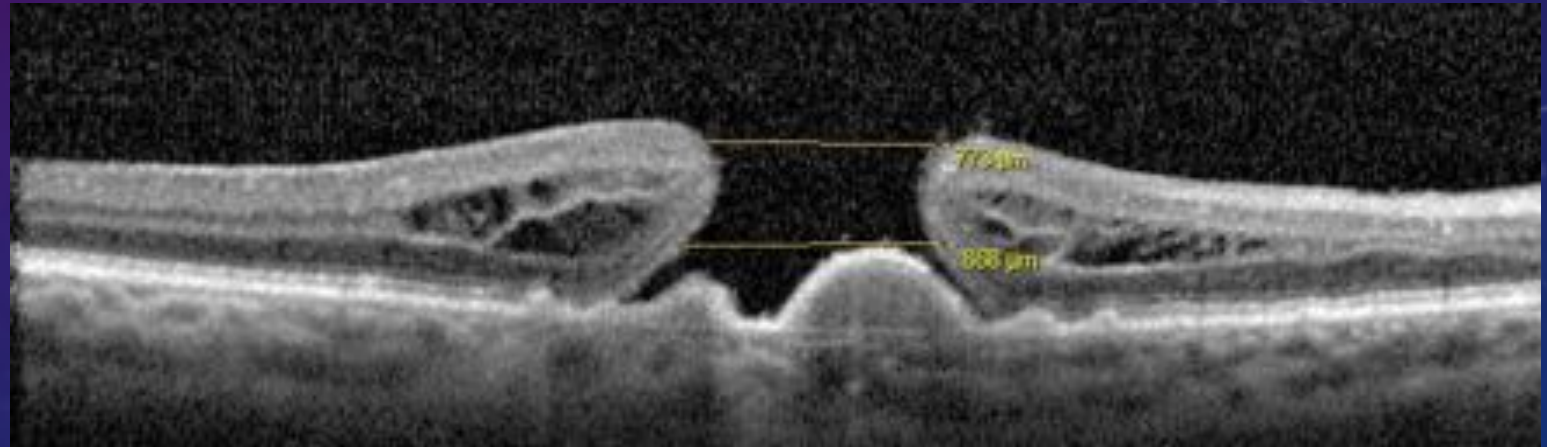
# 'STAGED' TECHNIQUE

- Graft initiated outside major vascular arcades using diathermy and vertical scissors
- Perfluorocarbon liquid (PFCL) used to stabilize posterior pole/graft
- Graft harvested using loop scraper and microforceps
- Graft positioned over macular hole
- Eye filled with PFCL
- PFCL removed 7-14 days later after confirming graft in position on post-operative OCT



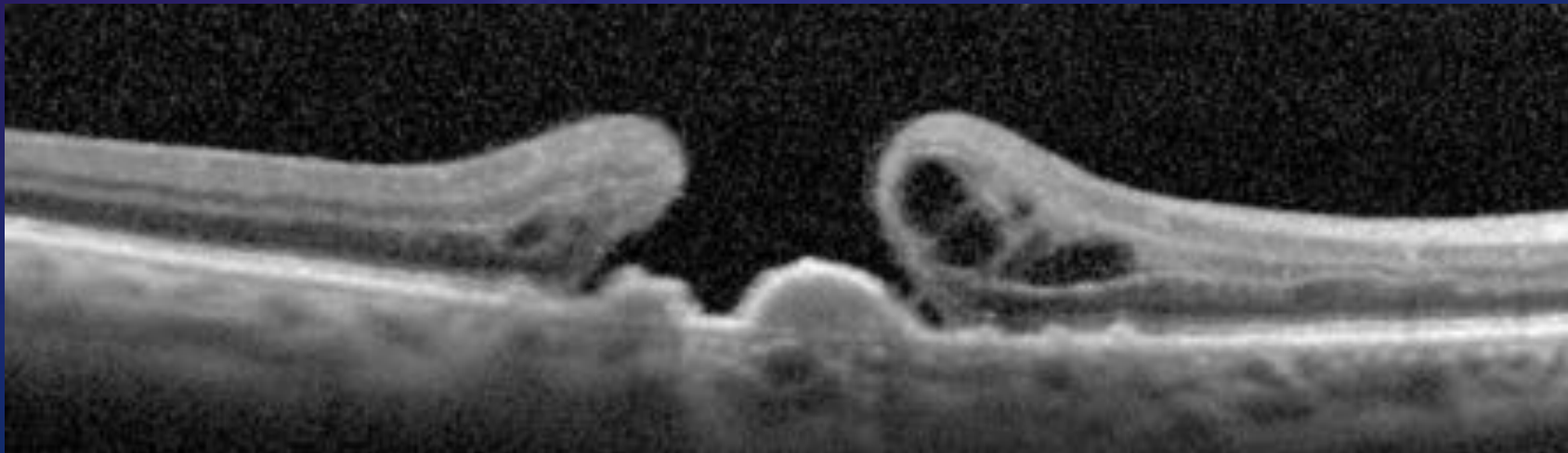
# PATIENT CASE

- 76 year old man presented with seven months of vision loss OD
- History of amlyopia OS
- VA 20/200 OD, 20/50 OS
- 2-3+ NSC OU
- OCT: large full-thickness MH with underlying PED



## PATIENT CASE

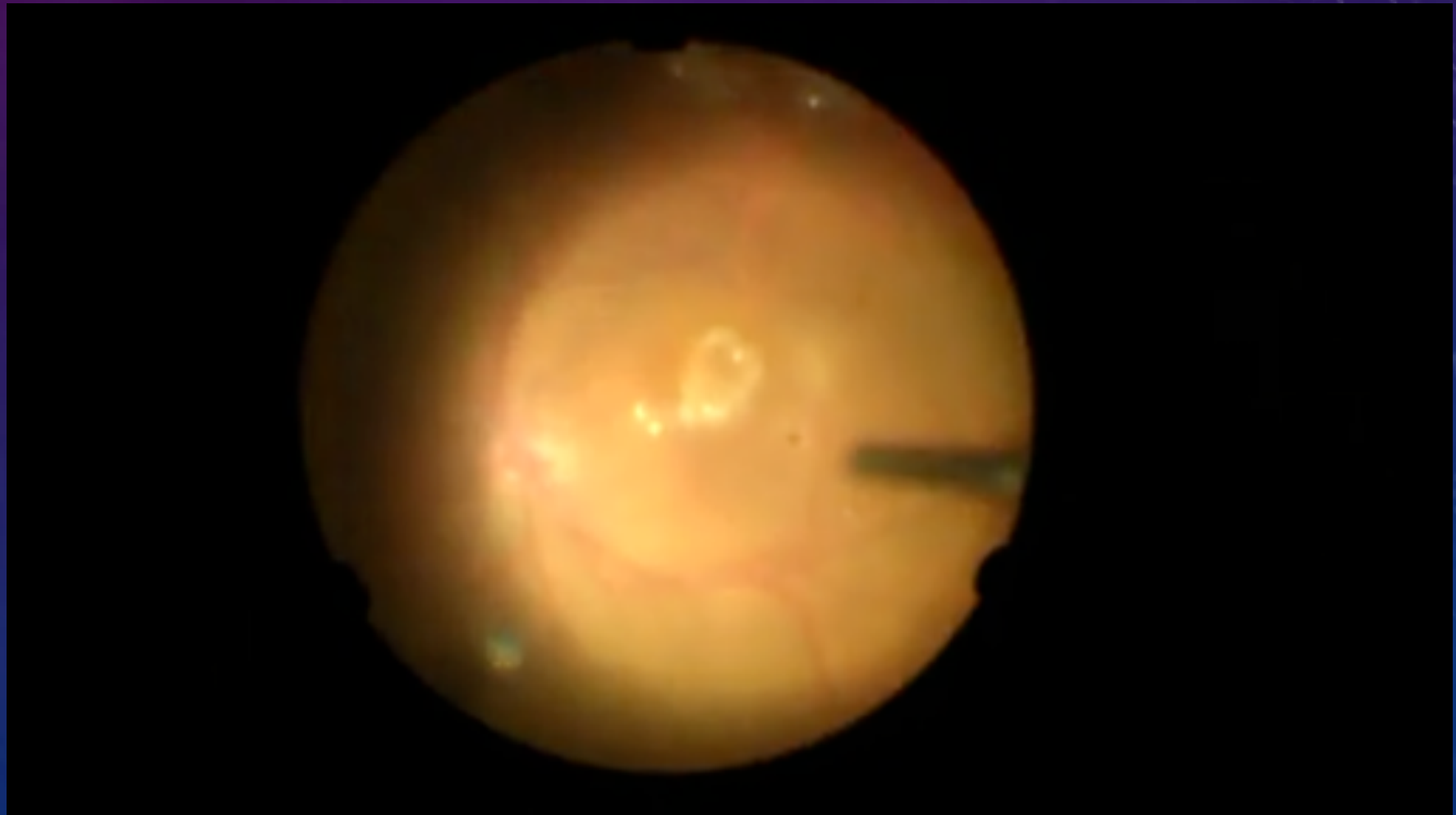
- Patient underwent combined CE/IOL/PPV/MP/ICG/AFX/C3F8 with prone positioning
- POM#1 VA 20/400
- OCT obtained
- MH still open, PED same



## PATIENT CASE

- Decision made to proceed with autologous retinal transplant with staged removal of PFCL 14 days later

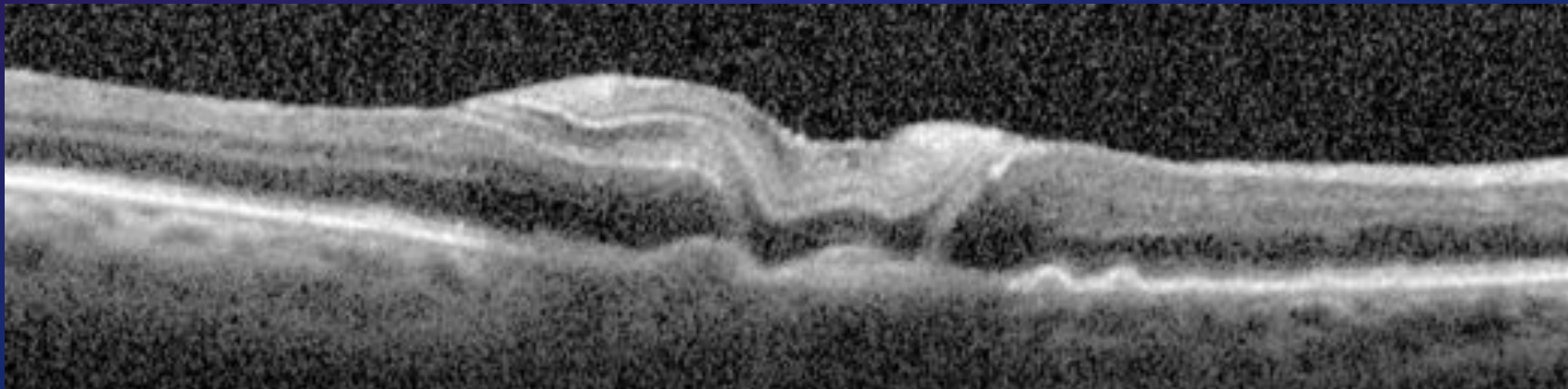
# GRAFT POSITIONING





# POD#1

- OCT with graft over hole, PED resolved, PFCL



# POW#1 AFTER PFCL REMOVAL

- OCT with graft over hole, PED resolved



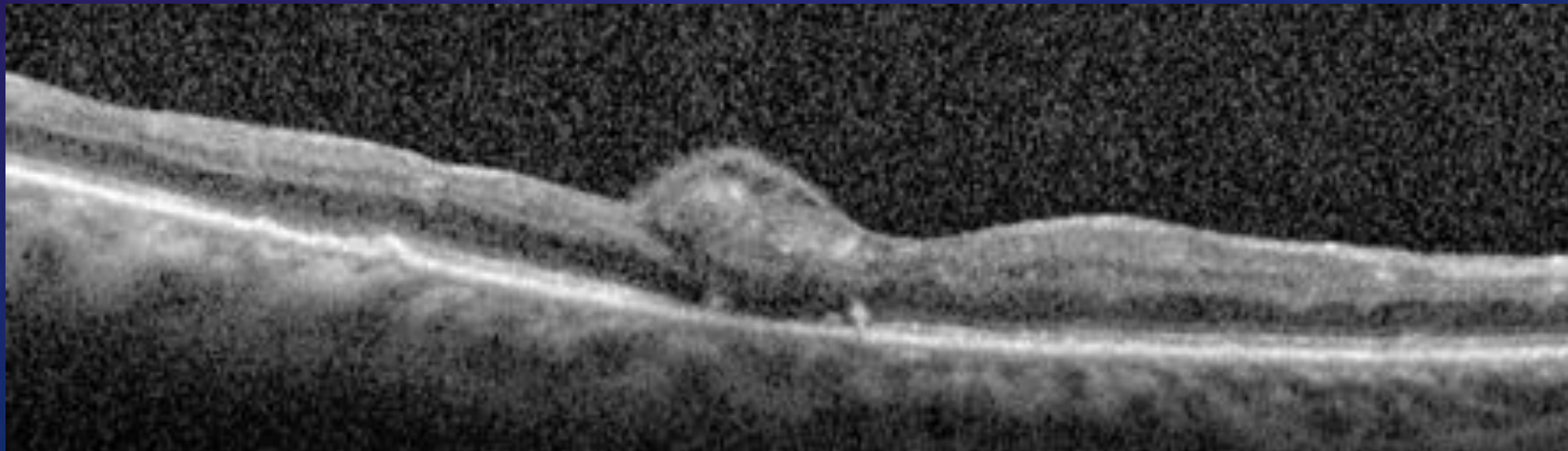
# POM#1 AFTER PFCL REMOVAL

- OCT with graft over hole, PED resolved
- VA 20/400 OD



# POM#5 AFTER PFCL REMOVAL (DELAY DUE TO COVID-19)

- OCT with graft over hole, PED resolved
- VA 20/80 OD



# DISCUSSION POINTS

- What is mechanism? Scaffold versus tissue incorporation
- PED resolution → secondary to PFCL or to closure of the MH?
- Visual acuity improvements noted over time
- Importance of dominance
- Value of this technique for non-myopic chronic, large MHs demonstrated