

Abstract 439

SEQUENTIAL PPV AND INVERTED ILM FLAP TECHNIQUE FOR RHEGMATOGENOUS RETINAL DETACHMENTS WITH PERIPHERAL BREAKS AND CONCOMITANT NON-CAUSATIVE MACULAR HOLE IN NON-HIGHLY MYOPIC PATIENTS

Balta G.^[1], Tofolean I.T.^[2], Tiu T.^[3], Dinu V.^[4], Alexandrescu C.M.^[4], Balta F.^[4], Voinea L.M.^[4]

^[1]Doctoral School, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania ~ Bucharest ~ Romania,

^[2]Department of Biophysics, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania ~ Bucharest ~

Romania, ^[3]5 Retina Clinic, Bucharest, Romania ~ Bucharest ~ Romania, ^[4]Department of Ophthalmology, "Carol

Davila" University of Medicine and Pharmacy, Bucharest, Romania ~ Bucharest ~ Romania

Introduction:

To present the anatomical and functional results of sequential pars plana vitrectomy (PPV) for treating rhegmatogenous retinal detachment (RRD) with peripheral breaks and concomitant non-causative macular holes (MH) in non-highly myopic patients.

Materials and methods:

Medical records of patients who underwent RRD surgical repair between 2017 and 2023 were reviewed. Of 980 patients with RRD, 10 had concurrent MH and underwent sequential PPV for RRD repair and air-endotamponade, followed by MH repair using the inverted internal limiting membrane (ILM) flap technique and C2F6-endoamponade after a minimum of 1 week. The main outcomes measured were best-corrected visual acuity (BCVA) change, retinal reattachment rate, MH closure rate, and closure type.

Results:

The retinal reattachment rate was 90% after the primary surgery and 100% after subsequent surgery. MH closure was achieved in all cases. MH diameters ranged from 291 to 702 μ m. Anatomical recovery showed mainly 1A closure types (90%). Functional recovery demonstrated significant BCVA improvement, with a mean visual acuity gain of 1.58 ± 0.41 logMAR.

Conclusions:

For this infrequent pathology, sequential surgery using the inverted ILM flap technique and air/gas-endotamponade yielded favorable anatomical and functional outcomes. This controlled and standardized approach using sequential surgeries contributes to the achievement of consistent results.

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- PPV FOR RRD WITH PERIPHERAL BREAKS AND MH ! BALTVA ET AL 7
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