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EPIRETINAL TISSUE PRESERVING TEMPORAL INVERTED ILM FLAP TECHNIQUE FOR THE TREATMENT OF LAMELLAR MACULAR HOLES WITH EPIRETINAL PROLİFERATION

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Introduction:

The purpose of our study was to evaluate the anatomical and functional outcome of the temporal inverted internal limiting membrane (ILM) flap technique for the treatment of lamellar macular holes (LMHs) associated with the lamellar hole-associated epiretinal proliferation (LHEP).

Materials and methods:

In this retrospective study, 13 eyes of 13 patients who underwent 27-gauge pars plana vitrectomy, embedding of the LHEP into the MH and temporal inverted ILM flap technique were enrolled. All patients underwent a complete ophthalmic examination including dilated fundus examination, optical coherence tomography (OCT). The minimum follow-up time was 4 months. The primary outcome measure was improvement in best corrected visual acuity (BCVA) and improvement in foveal contour. The secondary outcome measures included the status of outer retinal layers (external limiting membrane-ELM & ellipsoid zone-EZ) and complications.

Results:

The mean age was 66.4 (56-81) years and the mean follow up time was 10.4 (4-31) months. The female to male ratio was 1.2:1. Preoperatively, all the patients showed LHEP and foveal tissue loss evidenced on OCT as foveal cavity with undermined edges and irregular foveal contour. In addition, central foveal bump, EZ/ELM defect and epiretinal membrane was detected in 3/13, 7/13 and 5/13 of the cases respectively. Successful hole closure was achieved in all patients postoperatively. The BCVA demonstrated the increase of 2 lines or more in 85% (11/13) of the eyes and an increase of 4 lines or more in 54% (7/13) of the patients. However, the EZ/ELM defect persisted in 33% (3/13) of the patients until the last follow up. No ILM flap related complications as early dislocation of the flap, full-thickness MH formation occurred.

Conclusions:

The temporal inverted ILM flap technique combined with embedding of the LHEP into the hole can provide satisfactory results with minimized complication rates. Further studies with larger study population and longer follow up are needed to establish this technique as standard surgical procedure for LMH with LHEP.