

Abstract 67

SHORT-TERM-OUTCOME ANALYSIS OF IDIOPATHIC EPIRETINAL MEMBRANE SURGERY

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Epiretinal membranes (ERM) are among the most common findings in retinal examinations. Structural changes in the retinal layers of patients with ERM can be visualized and classified using optical coherence tomography. This study aims to evaluate the structural and functional changes associated with the surgical treatment of ERM.

A retrospective study was conducted on 60 patients who underwent 23-gauge pars plana vitrectomy (PPV) combined with cataract surgery for idiopathic ERM between 2021 and 2024. Clinical data and spectral-domain optical coherence tomography (SD-OCT) images were analyzed preoperatively and at one and three months postoperatively. The primary outcome measure was best-corrected visual acuity (BCVA) before and after surgery, with an assessment of the impact of anatomical factors, including disease stage and OCT biomarkers, on BCVA.

Sixty eyes (15 with stage 2, 27 with stage 3, and 18 with stage 4 ERM) from 60 patients were included. At the time of surgery, the mean patient age was 70.1 ± 6.8 years. The mean BCVA significantly improved from LogMAR 0.67 ± 0.3 to 0.38 ± 0.3 ($p < 0.001$). The improvement in BCVA was significant across all disease stages, with earlier stages showing better outcomes. Central foveal thickness (CFT) significantly decreased from 500.3 ± 103.9 to 377.8 ± 80.6 μm ($p < 0.001$) across all ERM stages. Disease stage, preoperative CFT, and the presence of ellipsoid zone disruption were significant predictors of postoperative BCVA.

Early-stage ERM is associated with a better visual prognosis and fewer inner and outer retinal changes on OCT. Key prognostic factors for postoperative BCVA include disease stage, preoperative BCVA and CFT, and the presence of ellipsoid zone disruption.