جامعة الفيوم - كليه الطب

Prognostic Factors of Pars Plana Vitrectomy in Treatment of Lamellar Macular Holes

Objective: Detecting prognostic factors of pars plana vitrectomy in treatment of lamellar macular holes using Spectral Domain Optical Coherence Tomography (SD-OCT).

Methods: Prospective intervention study recruiting 20 eyes of 20 patients with lamellar macular hole. Patients underwent 23 G Pars plana vitrectomy with Epi-Retinal Membrane (ERM) and Internal Limiting Membrane (ILM) peeling with inverted flap on the surface with sulphur hexafluoride gas tamponade. Patients were evaluated pre-operatively and at one, three and six months post-operatively for Best Corrected Visual Acuity (BCVA, logMAR), OCT evaluation of ellipsoid zone, Central Macular Thickness (CMT) and foveal configuration.

Results: Visual acuity improved in 14 eyes at a mean of 6 months after vitrectomy. Subgroup analysis showed that statistically significant visual benefit was only observed in patients with an intact photoreceptor Inner Segment/Outer Segment (IS/OS) junction ($p=0.022$), with foveal thickness bigger than 100 μm ($p<0.0001$), presence of preoperative epiretinal membrane ($p=0.01$), absence of Lamellar Hole associated Epiretinal Proliferation (LHEP) ($p=0.01$) and pre-operative BCVA is significantly correlated to post-operative BCVA ($r=0.506$, $p=0.023$). The most efficient model to predict final VA was the combination of preoperative Visual Acuity (VA) and the presence or absence of IS/OS disruption.

Conclusion: Presence of Epiretinal Membrane (ERM), absence of Lamellar Hole associated Epiretinal Proliferation (LHEP), intact photoreceptor IS/OS junction, minimum foveal thickness more than 100 μm and good initial BCVA are all favorable prognostic factors.