

ILM as an Adjuvant for Stage IV Macular Hole Surgery

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Advantages:

The aim of this presentation is to demonstrate a new technique in macular hole surgery in cases of large stage IV macular holes. Leaving a 1-2mm remnant of ILM on the surface of the macular hole improves visual and anatomic outcomes in patients with stage IV macular holes. Probably remnants of ILM act as a base membrane for Muller cells migrating to close the macular hole.

Methods:

94 eyes of 90 patients with full thickness macular hole were measured with OCT or Spectral OCT. Before surgery optical coherence tomography (OCT) or spectral optical coherence tomography (SOCT) was performed. Holes with a diameter 400-3200 μ m were included into this study. Pars plana Vitrectomy with ILM peeling and fluid air exchange was performed. In some randomly selected cases the surgeon left small amounts of ILM on the surface of the macular hole. The remnants of ILM that were beside the borders of the macular hole were cut off either with vitreous scissors or with a vitreous cutter.

Effectiveness / Safety:

Mean preoperative visual acuity was 0.09. In 61 patients complete ILM removal was performed and in 33 patients remnants of the ILM were left on the surface of the macular hole. 86.5% of macular holes were closed after the first surgery in patients with complete ILM removal and 100% in the patients with remnants left on the surface of the macular hole only. Patients with complete ILM removal achieved mean visual acuity 0.11 and patients with remnants of the vitreous left on the surface of the macular hole achieved mean postoperative visual acuity 0.299. The difference was statistically significant. No postoperative complications were observed.