

Surgical Retina

INVERTED INTERNAL LIMITING MEMBRANE-FLAP TECHNIQUE FOR MACULAR HOLE IN HIGH MYOPIC EYES: A MICROPERIMETRIC ANALYSIS

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PURPOSE: To evaluate macular function after successful inverted ILM-flap technique for macular hole in high myopic eyes (MMH) by using microperimetry in order to predict visual prognosis.

Methods: In this prospective, unrandomized study, 23 eyes of 23 patients after surgical Closure of MMH were included. All patients underwent inverted ILM-flap and gas tamponade. Study outcomes including best-corrected visual acuity (BCVA), retinal sensitivity (RS) at central 12°, central retinal sensitivity (CRS) at central 4° and mean deviation (MD), and fixation behavior as bivariate contour ellipse area (BCEA, degrees²) measured by microperimeter, were evaluated over 6 months.

RESULTS: The BCVA improved from 20/191 at baseline to 20/59 at last follow-up (p0.001). Over 6 months, retinal sensitivity improved (RS, p=0.001; CRS, p0.0001; MD, p=0.03) and the BCEA decreased in dimension, although not significantly (p≥0.05). Multiple stepwise regression showed 6-months BCVA was associated with pre-operative lens status ($\beta = -0.41$, p=0.001) and MD ($\beta = -0.03$, p=0.003).

CONCLUSIONS: Surgical success of inverted ILM-flap technique for MMH results in good functional recovery. Microperimetry may be a useful tool to detect functional changes and to predict post-surgical visual acuity.