

Non-vitreotomizing idiopathic macular pucker surgery performed with 25 gauge infusion system with 27 gauge light using only 2 sclerotomies

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Advantages:

To improve best corrected (BCVA) using only 2 sclerotomies (no lens opacity or retinal complications,) reduce duration of surgery and minimize inflammatory reactions, preserving the option to convert the surgery from no-vitreotomy to minimal-vitreotomy if necessary.

Methods:

Patients underwent minimal-invasive 25G surgery, using a 25G infusion system with a 27G light (Photon IITM, Synergetics USA, Inc.). A new, 2-sclerotomy technique was used: one for the light (within the infusion line) and one for the forceps.

Effectiveness / Safety:

Twenty patients (20 eyes) were included in the series from January 2008 to March 2009. Baseline BCVA was $0,43 \pm 0,15$. At 12-month follow-up, mean BCVA was significantly better than baseline in 19/20 (95%, P .05), with mean BCVA improvement up to $0,83 \pm 0,16$ (P: .05). None of the patients experienced cataract progression up to the last follow-up (P: .05). Metamorphopsia decreased in 19/20 patients (95%, P: .05). Out of 20 patients, the only complication observed was vitreous hemorrhage in 1 eye. No retinal tears and no retinal detachments occurred until last follow-up. The Photon II device may additionally improve the non-vitreotomizing technique by minimizing risks of ocular hypotony with the opening of the infusion line. In addition, the surgery can be converted to minimal vitrectomy if necessary. Two-sclerotomy surgery is a valid technique for all epiretinal membrane surgeries.