

## Evaluating adjunctive surgical procedures of vitrectomy for diabetic macular edema with visual acuity and optical coherence tomographic outcomes

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### Purpose:

To investigate visual acuity and optical coherence tomographic (OCT) outcomes, and adverse events, associated with intravitreal triamcinolone acetonide (TA) injection and pars plana vitrectomy for diabetic macular edema (DME).

### Methods:

Retrospective, non-comparative, interventional, consecutive case series. Records were reviewed of twenty eight eyes of twenty four patients treated for DME. The eyes were classified according the surgical procedure into two groups: 8 eyes (group I) treated by a vitrectomy with internal limiting membrane (ILM) removal without TA injection; 20 eyes (group II) treated by vitrectomie with ILM peeling and TA injection. We report six month follow-up visual acuity as well as OCT measurements.

### Results:

The mean preoperative visual acuity was 20/160 (ETDRS=38). The mean postoperative visual acuity after 6 months was 20/100 (ETDRS=50). The postoperative visual acuity after 6 months resulted in improvement, invariability and deterioration levels of 75%, 18% and 7%, respectively. The percentage of postoperative visual improvement, invariability and deterioration levels of group I was 37.5%, 50% and 12.5%, respectively. For group II, it was 80%, 15% and 5%, respectively. We found a significant statistical difference in the improvement levels of the two groups ( $p \leq 0.05$ ). Mean foveal thickness was 471  $\mu$ m at baseline, compared to 285  $\mu$ m at 6 months ( $p \leq 0.05$ ). Intraocular pressure elevation  $>10$ mmHg compared to pre-injection occurred in 3/28 eyes at 1 month, and 0/28 eyes at 6 months. No cases of sterile or infectious endophthalmitis occurred and no steroid-induced glaucoma developed.

### Conclusion:

The present study suggests that it's better to perform vitrectomy with ILM peeling and TA injection than vitrectomy with ILM peeling alone in DME. Case-controlled studies are necessary to assess the benefit of this combined therapy.

