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### **Predictive factors for short-term visual outcome after intravitreal triamcinolone acetonide injection for diabetic macular edema: an optical coherence tomography study**

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**Purpose:** To evaluate the predictive factors for visual outcome after intravitreal triamcinolone acetonide injection to treat refractory diabetic macular edema.

**Methods:** We performed a retrospective chart review of patients with diabetic macular edema who met the following inclusion criteria: clinically significant diabetic macular edema, receipt of a 4mg/0.1ml intravitreal triamcinolone acetonide injection, and optical coherence tomography (OCT) of the macula performed up to ten days prior to injection. All patients received a full ophthalmic examination including best-corrected Snellen visual acuity (VA). The main outcome measure was the mean change in vision 3 months after injection.

**Results:** Data from 73 eyes of 59 patients were analyzed. After a mean follow-up of 324 days, the mean change in vision was -0.075 logMAR units with 27.3% improving  $\geq 3$  lines, 6.8% declining  $\geq 3$  lines and 60.2% remaining stable within 1 line of baseline vision. Statistical analysis was performed using multivariate generalized estimating equations based on data from 52 eyes of 42 patients. Factors associated with an improvement in vision 3 months after injection were worse baseline visual acuity (-0.27 logMAR units/unit increase in baseline VA,  $P=0.002$ ) and presence of subretinal fluid (-0.17 logMAR units,  $P=0.06$ ). The presence of cystoid macular edema negatively affected the visual outcome (0.15 logMAR units,  $P=0.03$ ). In addition, the presence of an epiretinal membrane (ERM) was associated with less visual improvement. ERM modified the effect of baseline VA as demonstrated by a significant interaction between these two variables (0.34 logMAR units/unit increase in baseline VA,  $P=0.04$ ).

**Conclusions:** OCT factors and baseline visual acuity can be useful in predicting visual acuity outcomes 3 months after intravitreal triamcinolone acetonide injection in patients with refractory diabetic macular edema.