

Comparison of Effects of Intravitreal Triamcinolone Injection and Intravitreal Bevacizumab Injection for Diabetic Macular Edema

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The purpose of this study was compare the central macular thickness and visual acuity outcomes associated with a single intravitreal triamcinolone injection versus bevacizumab for the treatment of diabetic macular edema.

Thirty-nine patients (43 eyes) were randomly assigned to receive a single injection of either 4 mg/0.1 ml triamcinolone acetate or 1.25 mg/0.05 ml bevacizumab. Complete ophthalmologic evaluation was performed at baseline and 1 month, 2 months, 3 months, 4 months after treatment. Main outcome measures included central macular thickness and total macular volume by optical coherence tomography (OCT) and Logarithm of the minimum angle of resolution (LogMAR) best corrected visual acuity and intraocular pressure.

Central macular thickness was significantly reduced in the triamcinolone group compared with the bevacizumab group at 1, 2, 3 months ($p < 0.05$). Total macular volume was significantly reduced in the triamcinolone group compared with the bevacizumab group at 1, 2, 3, 4 months ($p < 0.05$). LogMAR best corrected visual acuity was not significant statistically between the triamcinolone group and bevacizumab group. Mean intraocular pressure was significantly higher in the triamcinolone group than the bevacizumab group at 1, 2, 3, 4 months ($p < 0.05$).

One single intravitreal injection of triamcinolone may offer certain advantages over bevacizumab in the short-term management of diabetic macular edema, specifically with regard to changes in central macular thickness and total macular volume. The actual clinical relevance of our preliminary findings, however, remains to be determined in future larger studies