

## Study of comparison of effect and complications of intravitreal triamcinolone injection of 1 mg, 2 mg and 4 mg in macular edema of vascular origin

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### Abstract:

**Introduction:** The present study aimed to compare the efficacy and safety of different doses (1 mg, 2 mg and 4 mg) of triamcinolone acetonide (IVTA) in treatment of eyes with macular edema of vascular origin. **Methods:** Using simple random sampling among patients attending our tertiary healthcare referral centre, 60 patients fulfilling selection criteria were divided into 3 groups and were followed up for a period of 16 weeks. Following IVTA injections of different doses, patients were observed for changes in best-corrected visual acuity (BCVA), central foveal thickness (CFT) on optical coherence tomography (OCT), intraocular pressure (IOP) and cataract occurrence/ progression in all three groups at 1 week, 4 weeks, 12 weeks and 16 weeks. **Results:** Following IVTA injection in all three groups (1 mg, 2 mg and 4 mg), mean BCVA improved from baseline but no statistically significant difference was observed in mean BCVA at different follow ups between the three groups. Mean CFT significantly improved from baseline in all three groups but no statistically significant difference was observed at different follow ups between groups. Mean IOP increased from baseline in all three groups but no statistically significant difference was observed among groups at different follow ups. Anti glaucoma treatment was required at end of 16 weeks postoperatively in 0, 1 and 3 eyes receiving 1 mg, 2 mg and 4 mg IVTA respectively. Lenticular changes at the end of 16 weeks postoperatively were found in 0, 1 and 2 eyes with 1 mg, 2 mg and 4 mg IVTA respectively. **Conclusion:** 4 mg dose of IVTA improves the functional and anatomical outcome in macular edema of vascular origin in most patients followed by 2 mg dose. 1 mg and 2 mg dose of IVTA has less incidence of steroid induced elevation of IOP and lenticular opacity development or progression. Further large scale studies are recommended to compare the effectiveness and safety of different doses of IVTA.

**Keywords:** Triamcinolone Acetonide, Macular edema, diabetic retinopathy, retinal vein occlusion