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Secondary Glaucoma after Intravitreal Triamcinolone Acetate Injection

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PURPOSE
Intravitreal triamcinolone acetate injection has become very popular for treating a variety of conditions ranging from macular edema to age-related macular degeneration. Its complication rate, however, needs to be closely evaluated.

METHODS
A prospective study was undertaken to evaluate the postoperative complications of intravitreal triamcinolone acetate injection in eyes undergoing vitrectomy for clinically significant macular edema. At the conclusion of vitrectomy, 106 eyes received 0.1 ml (~4 mg), preservative free triamcinolone acetate. All eyes received prophylactic glaucoma medication (timolol 2x daily for 4 months) and were closely followed.

RESULTS
No patient was lost to follow-up (10 to 26 months). The macular edema was due to diabetes in 85% of eyes, to venous occlusion in 8%, to uveitis in 4%, and to other causes in 3%. No eye developed endophthalmitis, but 12 eyes (11%) showed elevated intraocular pressure (IOP). The pressure rise appeared at an average of 7 (2-17) weeks after the injection. Medical treatment was sufficient to reduce the IOP to normal level in 4 eyes (4%), but 4 eyes (4%) required trabeculectomy; laser or cryo cyclodestruction were used in the remaining 4 eyes.

CONCLUSION
While proper prepping of the eyes appears to be have reduced the incidence of endophthalmitis after intravitreal triamcinolone acetate injection, secondary glaucoma remains an important issue. Even prophylactic medical treatment cannot eliminate the risk of postinjection IOP elevation, and long-term follow-up is recommended since the secondary glaucoma can present as late as 17 months later.