

Thermal Laser Photocoagulation Combined with Intravitreal Triamcinolone Injection for Treatment of Choroidal Neovascularization

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PURPOSE

To determine via a retrospective review of treated patients whether thermal laser photocoagulation combined with intravitreal triamcinolone (IVTA) can safely and effectively reduce the risk of neovascular membrane recurrence and vision loss in patients with choroidal neovascularization (CNV).

METHODS

We conducted a retrospective review of patients treated with same day thermal laser and IVTA for CNV. We identified 7 men and 6 women, average age 71 years, treated in our clinics from 1/05 through 9/05 with well-defined juxtafoveal, extrafoveal, or peripapillary CNVs. Patients were treated with argon or krypton laser followed by IVTA injection (4mg in 0.1ml) through the inferior pars plana after preparation with topical anesthesia and 5% povidine/iodine. Follow-up exams were at 2-5 days, 2 weeks, 6 weeks, and 3-6 months with fluorescein angiography at 2 and 6 weeks, at least. The main outcome measures were visual acuity, intraocular pressure, and CNV recurrence rate.

RESULTS

Age-related macular degeneration was the cause of CNV in 12/13 eyes, while one eye had presumed ocular histoplasmosis. Followup of >6 months was obtained in 9/13 patients. The average best-corrected visual acuity was 20/60, 20/50, 20/50, and 20/50 at baseline and 2, 4, and 6 months post-treatment, respectively. Most patients maintained their visual acuity (3/13, 23%) or gained (7/13, 54%). Two eyes (2/13, 15%) lost >3 lines at 6 months follow-up. One eye had recurrence of CNV at 4 months and required additional treatment with thermal laser and IVTA resulting in a 1 line vision decrease at final follow-up. Four eyes (31%) had intraocular pressure > 21 mmHg at follow-up examination and were treated with topical antiglaucoma drugs. No patient needed glaucoma surgery. Also, no cataract progression, endophthalmitis, retinal detachment, vitreous hemorrhage or other complications were noted at follow-up examinations.

CONCLUSION

The combination of thermal laser and IVTA appears to be safe and effective for treatment of CNV. In this small series the recurrence rate was much lower than the 30-60% seen with thermal laser in the MPS studies. The long term safety and effectiveness of this treatment is unknown, and further study is needed to confirm these early findings.