**Transpupillary Thermotherapy for the Treatment of Choroidal
Neovascularization in Age-Related Macular Degeneration**

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Purpose: To evaluate the therapeutic outcome and the recurrence rate of choroidal neovascularization (CNV) secondary to age-related macular degeneration (AMD) after transpupillary thermotherapy (TTT).

Methods: Retrospective, non-randomized study of 83 eyes of 80 patients with subfoveal CNV treated with TTT. Treatment outcome was assessed with visual acuity, fluorescein, indocyanine green angiography and clinical funduscopy examination. Visual acuity was measured by Snellen chart and converted to logarithm of the minimal angle resolution (logMAR) visual acuity for statistical analysis. Improvement or decline in vision was defined as change of more than 0.2 in logMAR visual acuity.

Results: 65 membranes were occult (78.3%), 8 classic (2.7%) and 10 mixed (12%). The mean follow-up period was 11.1 +/- 10.7 months (from 0.5 to 46 months). After TTT, the membranes were closed in 62 eyes (74.7%) according to either ophthalmoscopic or angiographic examinations. Each patient had an average of 1.72 treatment sessions (range, 1 to 6). Regarding the complications, subretinal hemorrhage in 3 eyes (3.6%), subretinal fibrosis in 2 eyes (2.4%), RPE tear in 2 eyes (2.4%), and cystic change at macular area in 2 eyes (2.4%) were noted.

The visual acuity was improved in 19 eyes (24.4%), remained unchanged in 21 eyes (26.9%) and deteriorated in 38 eyes (48.7%). 31 eyes experienced recurrence (37.3%). The interval between treatment and recurrence is 7.8 +/- 6.3 months (range, 2 to 23 months). With Kaplan-Meier estimator, cumulative recurrence rate is 37.6% in 12 months and 77% in 23 months. There is no significant difference comparing the cumulative recurrence rates between occult type and non-occult type CNV (long-rank test, $p=0.826$).

Conclusions: TTT is an efficacious tool in stabilization or improvement of visual acuity in patients with subfoveal CNV due to AMD. It can close CNV effectively despite its high recurrence rate. Patients should be informed of the possibility of multiple sessions prior to the treatment, as well as the complications.