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## TRANSPUPILLARY THERMOTHERAPY FOR CHOROIDAL MELANOMA

Choiniak, MMM; Uno, F; Guia, T; Erwenne, CM. Purpose: This study evaluates tumor response, ocular side effects and visual results of primary transpupillary thermotherapy for small choroidal melanomas. Methods: Infrared diode laser energy at 810 nm was used with a beam diameter of about 3mm and 1 minute exposure time, delivered over 1 to 6 sessions, with intervals of 6 weeks, and patients were followed for at least 1 year. All treated tumors had either documentation of growth or ophthalmoscopic risk factors for future growth and/or metastasis. Results: Of 27 consecutive patients with choroidal melanomas treated with transpupillary thermotherapy, 16(59.3%) were male and 11 (44.07%) were female. The mean age was 59,7 years. The right eye was involved in 11 cases (40.7%) and left eye in 16 cases (59.3%). Symptoms were present in 25 cases (92.59%). The most common symptom was blurred vision (74.1%). The mean tumor basal diameter was 8.52mm and tumor thickness was 2.78 mm. The tumor margin touched the optic disc in 5 eyes (18.5%) and was beneath the fovea in 6 eyes (22.2%). Documented growth was present in 19 eyes (70.4%), and known clinical risks for growth were present in all of the remaining 8 eyes, with an average of 3 of 5 statistical risk factors for growth per tumor and 2.67 of 4 for metastasis. After a mean of three treatment sessions and a minimum of 12 months of follow-up, the mean tumor thickness was reduced to 1.4 mm and basal diameter to 5.85mm. All patients had the size of the tumor decrease, with a mean thickness decrease of 1.37mm (48%) and basal diameter of 2.67mm (30.81%). Eve conservation was 100%. After treatment, the visual acuity was the same or better than the pretreatment visual acuity in 12 eyes (44.4%) and worse in 15 eyes (55.6%). The main reasons for poorer vision include treatment through the foveola for subfoveal tumor (6 eyes), retinal vascular obstruction (7 eyes), optic disc atrophy (5 eyes), vitreous hemorrhage (5 eyes), retinal traction (4 eyes). Complications occurred in 12 eyes (44,4%). One patient died from metastasis, 33 months after treatment Conclusions: Transpupillary thermotherapy may be an effective treatment for small posterior choroidal melanomas. Despite satisfactory local tumor control. ocular side effects can result in decreased vision. Longer follow-up will be necessary to assess the impact of thermotherapy on ultimate local tumor control and metastatic disease.