Circumscribed choroidal hemangioma: Visual outcome in the pre-photodynamic therapy (PDT) vs PDT eras in 458 cases

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Purpose:
To analyze visual outcome following treatment of choroidal hemangioma in the pre-photodynamic therapy (PDT) versus PDT eras.

Methods:
Retrospective comparative case series of 458 eyes over 51 years.

Results:
A comparison (pre-PDT [n=220 cases] (1967-2001) vs. PDT [n=238 cases] (2002-2018)) revealed PDT era patients were of older mean age (48.9 vs. 53.8 years, p=0.002), more likely with systemic hypertension (17.7% vs. 33.8%, p<0.001), tumor location in the macula (57.4% vs. 67.5%, p=0.01), with subretinal fluid on optical coherence tomography (OCT) (33.3% vs. 70.7%, p=0.01), and greater extent of overlying lipofuscin (p=0.001). Findings of tumor basal diameter and thickness and fluorescein and indocyanine green angiography were no different in the two eras. Treatment (pre-PDT vs. PDT) included argon laser photocoagulation (42.1% vs. 0.4%), PDT (0% vs. 43.8%), transpupillary thermotherapy (0% vs. 0.4%), plaque radiotherapy (7.0% vs. 5.2%), external beam radiotherapy (1.4% vs. 1.3%), enucleation (0.9% vs. 0.4%), and observation (48.6% vs. 47.6%). Following treatment, patients in the PDT era demonstrated better mean LogMAR visual acuity (1.28 vs. 0.51, p<0.001) (Snellen equivalent 20/400 vs. 20/63, p<0.001). In eyes with better entering visual acuity of ≥20/40 or 20/50-20/200, eyes in the PDT era showed significantly better visual outcome, reaching ≥20/40 (59.6% vs. 74.7%, p=0.001) and (25.4% vs. 47.3%, p<0.001), respectively.

Conclusions:
Management of choroidal hemangioma in the PDT era has allowed for significantly better visual outcome compared to the pre-PDT era, with mean final visual acuity of 20/400 (pre-PDT era) versus 20/63 (PDT era).