

SHORT COMMUNICATION

Successful management of melanocytoma-associated choroidal neovascularization with photodynamic therapy

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PURPOSE. To report the efficacy of photodynamic therapy in treatment of choroidal neovascular membrane (CNV) associated with melanocytoma of the optic disc.

METHODS. A middle-aged man with visual acuity of 20/200 in right eye was treated with photodynamic therapy for juxtafoveal classic CNV overlying the papillomacular bundle. CNV was secondary to ocular melanocytoma, a rare event.

RESULTS. At the 6-month follow-up, a scarred CNV with final visual acuity of 20/30 was noted clinically and angiographically. Tomography revealed high reflective scar tissue with flat macula and microperimetry showed restoration of retinal sensitivity over the papillomacular bundle.

CONCLUSIONS. Photodynamic therapy effectively resolved CNV that involved papillomacular bundle (secondary to melanocytoma) and restored retinal function in papillomacular bundle. (*Eur J Ophthalmol* 2006; 16: 776-8)

KEY WORDS. Choroidal neovascular membrane, Melanocytoma, Optic disc, Photodynamic therapy

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INTRODUCTION

Choroidal neovascularization (CNV) (1, 2) or idiopathic choroidal vasculopathy (3) are rarely associated with melanocytoma of the optic disc. Argon laser is effective in treating CNV and idiopathic choroidal vasculopathy secondary to choroidal tumors (3, 4). However, argon laser can be used only when the CNV is extrafoveal/juxtafoveal (MPS study) and leads to scotoma due to destruction of overlying retina. We report a case successfully treated with photodynamic therapy (PDT) for juxtafoveal CNV overlying the papillomacular bundle associated with melanocytoma of the optic disc.

Case report

A 43-year-old Lebanese man presented with decreased vision in the right eye of 1 month duration. His best-cor-

rected visual acuity was 20/200 and 20/20 in right and left eye, respectively. Slit lamp examination was unremarkable in both eyes. Amsler's grid revealed relative scotoma in temporal field sparing the center in the right eye. Ophthalmoscopic evaluation documented a melanocytoma of optic disc with juxtafoveal CNV overlying the papillomacular bundle associated with subretinal exudates and hemorrhage encroaching the subfoveal region (Fig. 1A). Left eye fundus evaluation showed myelinated nerve fibers along the nasal optic disc. Fluorescein angiography of the right eye showed blocked choroidal fluorescence due to melanocytoma and subretinal hemorrhage with hyperfluorescence along the papillomacular bundle corresponding to CNV (Fig. 1B). Optical coherence tomography (OCT) confirmed an elevated optic disc lesion with juxtafoveal neovascularization extending into the subsensory area possibly through a break in the retinal pigment epithelium (Fig. 2A). MP-1 microperimetry revealed absolute sco-

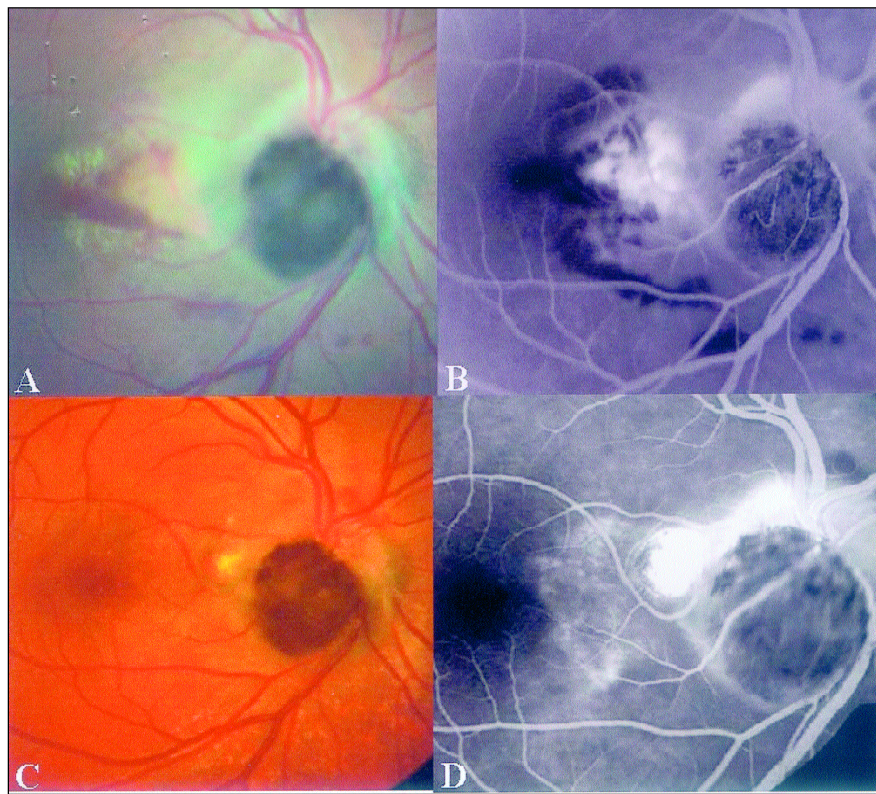
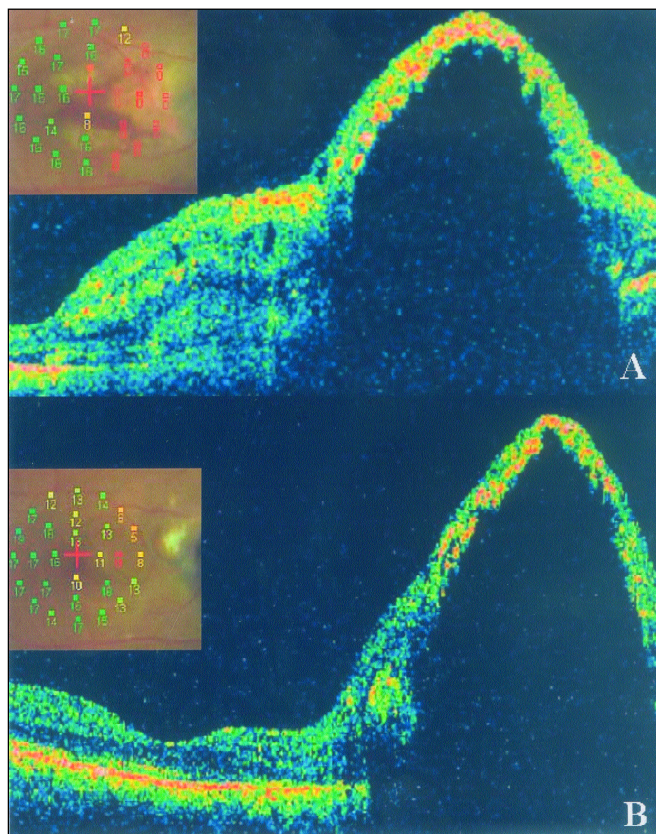


Fig. 1- (A) Fundus photograph of right eye showing optic disc melanocytoma, juxtafoveal choroidal neovascular membrane (CNV), subretinal hemorrhage, and exudates over papillomacular bundle. (B) Fluorescein angiography showing disc and peripapillary hypofluorescence corresponding to melanocytoma and subretinal hemorrhage with hyperfluorescent classic juxtafoveal membrane. (C) Fundus photograph post photodynamic therapy (PDT) showing scarred CNV with retinal pigment epithelium (RPE) alterations. (D) Fluorescein angiography post PDT showing hyperfluorescent staining (scar) and transmission defects from RPE alterations.



toma overlying CNV-associated melanocytoma and relative scotoma over the subfoveal hemorrhage (Fig. 2A, inset). OCT and MP-1 were unremarkable in the left eye except in the region of the myelinated nerve fibers. PDT was performed using a spot size of 3600 mm. Six months following PDT, the visual acuity improved to 20/30. Ophthalmoscopically, total resolution of subretinal hemorrhage, exudates, and subretinal scar with retinal pigment epithelium alterations was noted (Fig. 1C). Fluorescein angiography showed hyperfluorescent staining corresponding to scar and transmission defects from RPE alterations (Fig. 1D). Tomography revealed flat macula and high reflective scar tissue (Fig. 2B). Microperimetry revealed restoration of retinal sensitivity at the macula (Fig. 2B, inset). His vision was stable at 6 months with a final visual acuity of 20/30.

Fig. 2 - (A) Optical coherence tomography (OCT) shows thin echogenic line delineating anterior aspect of melanocytoma with complete shadowing behind, obscuring optic nerve and retinal details with neurosensory elevation adjoining its temporal margin. Inset: MP1 shows absolute scotoma overlying papillomacular bundle. (B) Post photodynamic therapy OCT showing resolution of sensory neural retinal elevation and scarred membrane. Inset: MP1 showing restoration of retinal sensitivity overlying papillomacular bundle.

DISCUSSION

Choroidal neovascularization is an uncommon complication of choroidal nevus, melanoma, or melanocytoma (1, 2, 4). Inflammation or necrosis (1) known to occur in melanocytoma can induce choroidal neovascularization and rupture of the Bruch's membrane.

The membranes were managed either with argon laser (3, 4) or the eye has been enucleated (1) on the suspicion of melanoma. Idiopathic choroidal vasculopathy in association with melanocytoma of the optic disc has been treated successfully with argon laser (3). However the overlying retina is destroyed through thermal damage from laser and leads to absolute scotoma.

Recently PDT has been used to treat subfoveal/juxtafoveal classic CNV associated with nevus with vari-

able visual results (5). Our case highlights resolution of CNV with good visual recovery (20/30) and improvement of retinal sensitivity over the papillomacular bundle evident on microperimetry. It demonstrates the advantage of PDT over argon laser in restoring retinal sensitivity. This can be significant if CNV involves papillomacular bundle as in our case.

The authors have no commercial interest.

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