



FIGURE 1. External photo of right eyelid showing area of mild cutaneous hypopigmentation on lateral third of the upper lid. Note the prominence of the cutaneous vessels in the area of hypopigmentation.



FIGURE 2. External photo of right eyelid 2 months after corticosteroid injection with resolution of hypopigmentation.

the same eye following an injection given several months earlier that she did not report. On both occasions, the skin changes occurred approximately 2 weeks after injection and resolved approximately 1 month later (Figure 2).

Given the temporal relationship between the posterior sub-Tenon triamcinolone injection and her dermal hypopigmentation and known reaction with intralesional injections for chalazia, we believe that her hypopigmentation is related to the triamcinolone injection. It is unclear whether the cutaneous reaction is related to the injection alone, to a cumulative effect of multiple sub-Tenon injections, or to an interaction between the corticosteroid and her other systemic therapy. Although the change was mild, it was significant enough for our patient to bring it to our attention. We report this case to alert the ophthalmologist of the potential risk for developing periocular skin hypo-

pigmentation following sub-Tenon triamcinolone injections and the proposed need to inform patients of this potential complication.

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Retinal Capillary Angioma in Familial Exudative Vitreoretinopathy Treated With Photodynamic Therapy

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PURPOSE: To report a case of familial exudative vitreoretinopathy with a retinal capillary angioma and persistent macular exudation treated with photodynamic therapy.

DESIGN: Interventional case report.

METHODS: A 39-year-old woman with familial exudative vitreoretinopathy presented with an intraretinal capillary angioma temporally with persistent macular exudation despite previous vitrectomy and thermal laser. Photodynamic therapy to the retinal angioma was performed.

RESULTS: Three months after photodynamic therapy, vision was stable at 20/200 with a reduction in lesion size on B-scan ultrasonography and no leakage on fluorescein angiography. With 10 months of follow-up there was no recurrence of leakage.

CONCLUSION: Retinal capillary angioma may be present in association with familial exudative vitreoretinopathy, and photodynamic therapy may provide a good alternative treatment to decrease exudation. (*Am J Ophthalmol*)

Accepted for publication Oct 3, 2003.

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FIGURE 1. (Top) Fundus photograph of right eye showing vasoproliferative tumor with exudates extending into macula. (Bottom) Fluorescein angiogram of right eye (arteriovenous phase) showing vascularized vasoproliferative mass.

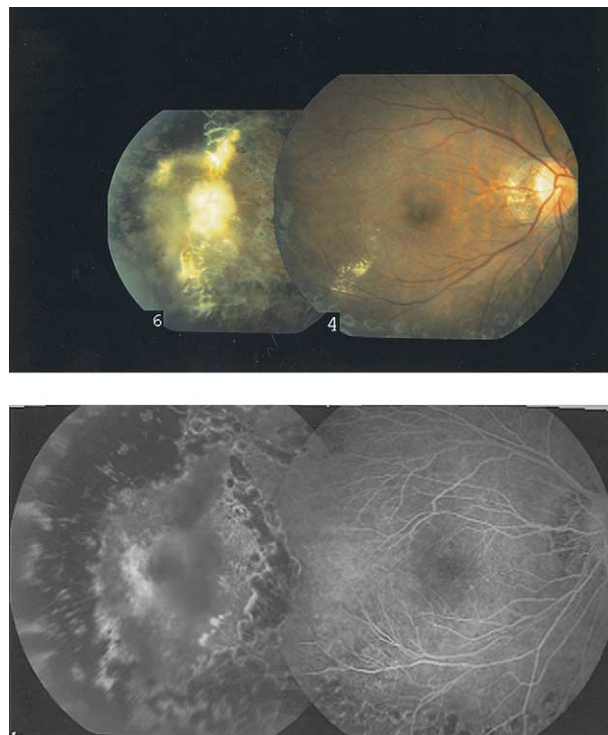


FIGURE 2. (Top) Fundus photograph of right eye 3 months after photodynamic therapy. Note marked decrease in vascularity, leakage, and bleeding. (Bottom) Fluorescein angiogram of right eye 3 months after photodynamic therapy. Note lack of vascularity and leakage in area of previous vasoproliferative tumor.

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THIS REPORT DESCRIBES A RARE CASE OF A RETINAL capillary angioma seen in familial exudative vitreoretinopathy (FEVR) treated with photodynamic therapy (PDT) because of decreasing vision as the result of macular exudation.

A 39-year-old woman presented with blurred of vision in the right eye of two and one half weeks' duration. Initial examination revealed a visual acuity of 20/40 in the right eye and 20/20 in the left eye with moderate myopia. Biomicroscopy of the right eye showed trace cells in the anterior segment with grade 1 anterior vitritis and posterior vitreous hemorrhage. The media was slightly hazy with a tilted disk, focal areas of retinal whitening along the inferior arcade, and an elevated lesion obscured by hemorrhage on the surface temporally. There was retinal ischemia with sharp termination of vessels peripheral to the lesion. The left fundus showed straightening of the vessels as they extended temporally with areas of peripheral cystoid degeneration and retinoschisis.

Laser photocoagulation was used to treat areas of ischemic retina, but the patient's vision deteriorated to count-

ing fingers (CF) at 2 feet in the right eye from increasing vitreous hemorrhage and exudation threatening the macula. Vitrectomy was performed with additional laser to the base of a more clearly visible retinal capillary angioma temporarily. Vision improved to 20/200. Over the next three months vision returned to CF 3 feet with persistent exudation in the macula and hemorrhage in the areas surrounding the tumor (Figure 1). Photodynamic therapy with verteporphin (Visudyne, Novartis, Basel, Switzerland) was offered. The consent for PDT was obtained with the understanding that this was an off-label use of PDT and verteporphin.

Photodynamic therapy was performed on the right eye using intravenous verteporphin at 6 mg/m² body surface area administered over 10 minutes. After 5 minutes, a 689-nm laser was applied using a Mainster laser lens for 83 seconds with spot size of 7500 μm over the area of the temporal tumor. At 3 months post PDT, the patient's vision stabilized to 20/200 with marked reduction in macular exudates (Figure 2). There was a decrease in size of the angioma by B-scan ultrasonography and fluorescein angiography showed loss of tumor vascular channels. At 10 months' follow-up, the patient's vision was stable at 20/200 with gliosis of the temporal mass. No further treatments were required.

Familial exudative vitreoretinopathy is a bilateral disorder of peripheral vascular development first described by Criswick and Schepens.¹ It manifests with abrupt termination of the temporal retinal vessels with scalloped borders and areas of neovascularization. In van Nouhuys's series of 106 patients he described a temporal fibrovascular mass occurring in 10 eyes (6%) of patients with associated fixed falciform retinal folds.² The treatment recommendations have generally been photocoagulation and cryotherapy for ischemic retina, whereas scleral buckling and vitrectomy are used for traction and retinal detachments.

Intraretinal exudation is a common complication of vasoproliferative tumors of the ocular fundus, occurring in approximately 82% of cases reviewed by Shields and associates.³ Treatment of these lesions with cryotherapy can be complicated by increasing exudation resulting in further deterioration in central vision. Photocoagulation conversely has limited depth of penetration in larger lesions.

The successful use of PDT in choroidal hemangiomas has been reported by several authors, including the report by Barbazetto and Schmidt-Erfurth of two patients.⁴ Resolution of subretinal fluid and absence of leakage was noted within 2 weeks of treatment. Subsequently, Ate-

bara⁵ and Rodriguez-Coleman and associates⁶ have separately reported the use of one to three sessions of PDT in retinal angiomas of various etiologies. In this one unusual case of a retinal capillary angioma in association with FEVR, PDT provided a good alternative treatment in reducing macular exudation with concurrent stabilization of vision with 10 months of follow-up.

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