the treatment and minimize the incidence of intractable intraocular pressure elevation after the injection.

The mean follow-up period was 4.8 months in this study. As this period increases and as the treatment effect of the triamcinolone acetonide wanes, the authors acknowledged that the cystoid macular edema may recur. These eyes may then require a repeat triamcinolone injection. However, in patients who are corticosteroid responsive and who have been placed on topical aqueous suppressants after the first intravitreal injection, should a repeat injection be performed?

With the small number of patients and the limited follow-up period in this as well as in other series,[3,4] we agreed with the authors that a randomized controlled trial is needed to evaluate the safety and efficacy of intravitreal triamcinolone acetonide in the treatment of cystoid macular edema associated with central retinal vein occlusion.

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AUTHOR REPLY

WE APPRECIATE THE COMMENTS BY DR. KWONG AND ASsociates on our article "Intravitreal Triamcinolone Acetonide in Eyes with Cystoid Macular Edema Associated with Central Retinal Vein Occlusion."[1] We are in full agreement that the intraocular pressure rise after intravitreal injection is a significant concern.

To address a specific point mentioned by Dr. Kwong and associates, the acute intraocular pressure rise to 55 mm Hg reported for Patient 5 was before the trabeculectomy surgery. The patient had adequate intraocular pressure after the surgery. Obviously a trabeculectomy is not a desirable outcome despite eventual intraocular pressure control. However, for most of the patients without a previous documented history of glaucoma, topical therapy was sufficient for intraocular pressure control. As suggested by the authors, a trial of topical corticosteroid may be selected for patients who may respond to intravitreal corticosteroid. However, it has been previously described that a trial of topical corticosteroid does not predict intraocular pressure elevation after future topical corticosteroid use.[2] It also would not likely predict an intraocular pressure spike after intravitreal corticosteroid administration.

The question of whether a repeat reinjection of triamcinolone should be performed for patients who have an intraocular pressure response after the initial injection and the predictive factors for postinjection intraocular pressure elevation are important, and the answers are currently not known. The National Eye Institute collaborative SCORE study to begin in 2004 will examine the long-term effects of repeated intravitreal triamcinolone injections in eyes with retinal vein occlusion. For many of our patients with central retinal vein occlusion and poor vision, the experienced visual benefits after triamcinolone injection often outweigh the potential risk of intraocular pressure elevation. As stated in our article, the risk of intraocular pressure elevation and glaucoma should be an integral part of our informed consent for intravitreal triamcinolone injection and the treatment choice should be individualized accordingly.

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Clinicopathologic Findings in Choroidal Melanomas After Failed Transpupillary Thermotherapy

EDITOR:

WE HAVE READ WITH INTEREST THE ARTICLE BY ZALDIVAR and associates that appeared in the May 2003 issue of the *American Journal of Ophthalmology* (Am J Ophthalmol 2003;135:657–663). The authors have reviewed the clinicopathologic features of eyes enucleated after failed transpupillary thermotherapy (TTT). They have brought

out an interesting point that choroidal melanomas may continue to grow along the path of least resistance even after TTT and, thus, manifest recurrences. The presence of intrascleral melanoma cells has been cited as the cause of tumor recurrence after TTT.[1]

Something that is striking from their Table on clinical findings of cases in their series is the selection criteria for TTT. It seems that the authors have included diffuse choroidal melanoma for TTT. Diffuse choroidal melanoma that constitutes approximately 5% of posterior uveal melanomas,[2] by definition, has a thickness 20% or less than the greatest basal dimension.[3] Cases 1, 2, and 4 in the current series can then be classified as diffuse choroidal melanomas.

Diffuse choroidal melanoma exhibits higher predisposition for extraocular extension, incidence ranging from 39% to 53%, and carries a poor prognosis;[3] TTT is not the choice of therapy for these tumors. While large diffuse choroidal melanomas are best managed by enucleation, plaque radiotherapy has been seen to have similar systemic results as enucleation in properly selected cases including those with intrascleral extension.[3]

• **MURTHY/CHOROIDAL MELANOMA:** In addition to diffuse choroidal melanomas, one of the tumors in the current series had a juxtapapillary location. It is known that tumors abutting or overhanging the optic disk are more likely to develop recurrence after TTT.[4]

Intrascleral extension of melanoma was recognized in four cases on ultrasonography before TTT was performed. Such patients are probably not suitable for TTT.

The current article eminently demonstrates that judicious cases election may minimize TTT failures.

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AUTHOR REPLY

WE WISH TO THANK DR. MURTHY AND ASSOCIATES FOR their interest in our work as it offers an opportunity for appraisal of our article[1] in the context of a similar study by Singh and coworkers.[2] Our study[1] and Singh and coworkers' study[2] showed extrascleral extension of melanoma in 9/17 (53%) of eyes that failed transpupillary thermotherapy (TTT). Murthy and associates note that diffuse melanoma exhibits a predisposition for extrascleral extension. They fail to note that a diagnosis of diffuse uveal melanoma requires that the melanoma occupy at least 25% of the uvea.[3] All of the melanomas in our study occupied less than 25% of the uvea, and there were no diffuse melanomas in our study at the time of treatment.[2] An important aspect in our study, as Murthy and associates correctly noted, is that choroidal melanoma after failed TTT tends to grow along the path of least resistance. The point is that the recurrence may exhibit a diffuse growth pattern, which may be clinically difficult to detect, exhibit extraocular extension, and be associated with a poor prognosis.

Murthy and associates mention that juxtapapillary location is a risk for melanoma recurrence after TTT.[4] We certainly agree with this and note that 12 of the 17 eyes with failed TTT in our[1] and Singh and coworkers[2] studies originally harbored juxtapapillary melanomas. Six of those eyes with juxtapapillary melanomas exhibited extrascleral extension of the melanoma after failed TTT.[1,2] This phenomenon likely occurs because of an abundance of emissary canals in the peripapillary area. We also note that patients in both series initially underwent TTT in the mid 1990s,[1,2] before juxtapapillary location was known to be associated with recurrence after TTT.[4]

This emphasizes the utility of contemporary clinicopathologic correlation studies that evaluate novel therapies. For instance, Murthy and associates mention that intrascleral extension was recognized in four cases by ultrasonography. They might also note that intrascleral and extrascleral extension of melanoma was not found by ultrasound in two of three eyes that had extrascleral extension found histologically.[1] Singh and coworkers described two eyes with melanoma after failed TTT, and the recurrent melanomas were not clinically appreciated.[2] Taking this into consideration, it is evident that choroidal melanoma may recur after TTT, even when using strict criteria for patient selection. The recurrent melanoma may exhibit a diffuse growth pattern and result in clinically undetected extraocular extension.

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