

problem in urban children of low to lower middle socioeconomic strata in India.<sup>4,6</sup>

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## Peripapillary Choroidal Thickening and Cavitation

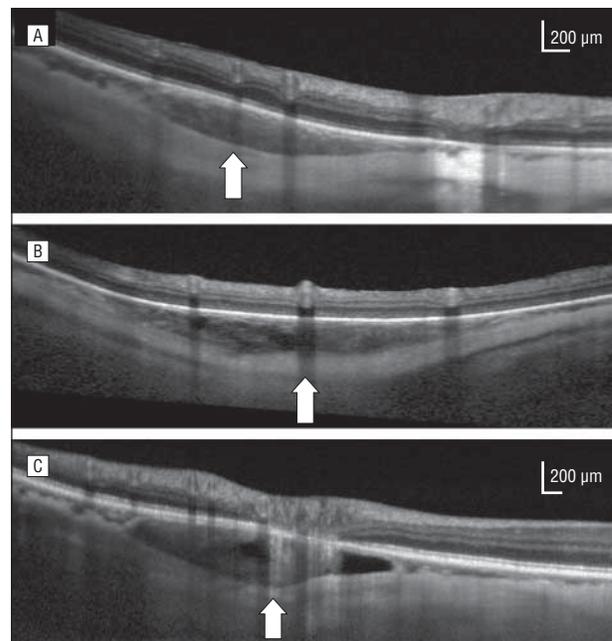
In the February 2003 issue of the *Archives*, we described a new fundusoscopic lesion that we termed *peripapillary detachment in pathologic myopia*.<sup>1</sup> Clinically, these lesions were seen as a well-circumscribed yellow-orange thickening at the inferior border of the myopic conus. First-generation optical coherence tomographic imaging appeared to show a peripapillary detachment of retinal pigment epithelium and retina. The lesions remained stable during a multiyear follow-up period and did not appear to affect visual

function. Further studies, including one in the *Archives* by Shimada et al,<sup>2</sup> supported our findings and added that peripapillary detachment in pathologic myopia could surround the entire optic disc and may be associated with abnormalities of retinal vasculature and with visual field defects. With newer-generation optical coherence tomographic imaging, Toranzo et al<sup>3</sup> reevaluated these lesions and observed an intrachoroidal hyporeflective space with normal overlying retinal pigment epithelium and retina. This finding was inconsistent with our original description. They suggested a new term for the lesion, *peripapillary intrachoroidal cavitation*.

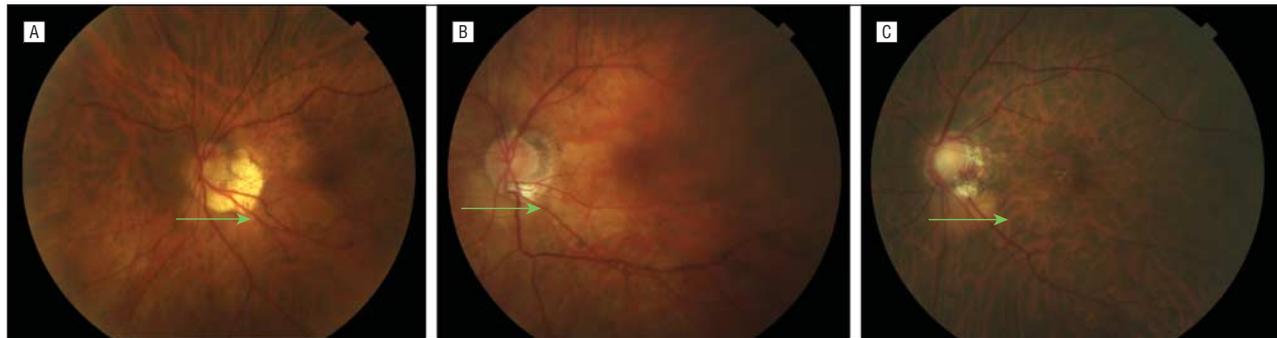


Video available online at [www.archophthalmol.com](http://www.archophthalmol.com)

We have followed the literature regarding these lesions and agree that our initial interpretation was inaccurate. We have reexamined this entity using enhanced depth imaging spectral-domain optical coherence tomography as de-



**Figure 2.** Enhanced depth imaging spectral-domain optical coherence tomography reveals a spectrum of findings in peripapillary choroidal thickening and cavitation, including choroidal thickening without cavitation (arrows) in patient 1 (A) and patient 2 (B) and choroidal thickening and hyporeflective choroidal cavitation (arrow) in patient 3 (C).



**Figure 1.** Peripapillary choroidal thickening and cavitation. Color photographs from patient 1 (A), patient 2 (B), and patient 3 (C) with high myopia ( $\geq -8$  diopters) reveal well-circumscribed yellow-orange lesions at the inferior border of the myopic conus. The arrows correspond to the scan locations in Figure 2.

scribed by Spaide et al.<sup>4</sup> Using this technique, we have noted that the characteristic peripapillary lesions may be associated with choroidal thickening with or without hyporeflective areas of cavitation (**Figure 1**, **Figure 2**, and video [<http://www.archophthalmol.com>]). We reaffirm the findings of Toranzo and colleagues; however, we propose the term *peripapillary choroidal thickening and cavitation* to more accurately reflect a spectrum of optical coherence tomographic findings associated with this lesion.

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**Online-Only Material:** The video is available at <http://www.archophthalmol.com>.

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### Frequency of Intraocular Pressure Increase Within Days After Intravitreal Triamcinolone Injections in the Diabetic Retinopathy Clinical Research Network

In a previously published randomized trial comparing intravitreal triamcinolone acetonide to focal/grid photocoagulation for diabetic macular edema,<sup>1</sup> the Diabetic Retinopathy Clinical Research Network (DRCR.net) measured intraocular pressure (IOP) 4 ± 3 days (referred to as the 4-day visit) after study participants assigned to the triamcinolone arm underwent an intravitreal injection. These data provide the opportunity to evalu-

ate the frequency of IOP increase within a few days following an intravitreal triamcinolone injection.

**Methods.** In the aforementioned randomized trial, IOP was measured at the 4-day visit after each injection of 1 mg or 4 mg of triamcinolone acetonide (Trivaris). From the IOP measurements at this visit, we determined the frequency of an IOP event, defined as an increase from the preinjection IOP of more than 10 mm Hg to an IOP of 30 mm Hg or greater.

**Results.** Rates of IOP events assessed 1 to 7 days after injections are shown in the **Table**. Of the 3 eyes (0.6%) with IOP events following the baseline injection, all were treated with IOP-lowering medication after the event and had an IOP lower than 30 mm Hg at the last available study visit, although 1 eye (in the 1-mg group) was still taking IOP-lowering medication. Of the 12 eyes (3%) that had IOP events following multiple injections, 11 were treated with IOP-lowering drugs. All but one (in the 4-mg group) were controlled, with IOPs lower than 30 mm Hg by the last available study visit, although 3 of the 11 (1 in the 1-mg group and 2 in the 4-mg group) were still taking IOP-lowering medication at the last visit. Of note, there were 74 post-baseline injections for which an eye was already receiving IOP-lowering medication during the corresponding 4-day visit, and IOP events were observed in 2 (3%) of these cases (both in the 4-mg group). A flowchart detailing all of the IOP events, including the preinjection and postinjection IOPs, use of IOP-lowering medication, and resolution of each event, are shown in the **Figure**.

**Comment.** Immediately after intravitreal injection, volume expansion causes an expected IOP elevation that is typically transient, with IOP normalization usually occurring within 30 minutes.<sup>2,3</sup> Steroid-induced IOP elevation is a well-described phenomenon that has been reported to occur typically a few weeks after exposure to corticosteroids.<sup>4-6</sup> Detection of a substantial IOP increase at the 4-day postinjection visit in a few study participants in this study was unexpected and, to our knowledge, previously unreported. The reasons for elevated IOP in this time frame are unclear. There were no reports of triamcinolone detected in the anterior segment of these eyes.

The IOP was not measured 1 to 7 days after the initial treatment visit in the 330 laser-treated eyes; however, none of these eyes met IOP event criteria at the 4-month study visit. Whether an increase in IOP 1 to 7 days after the injection is related to the injection alone or to the steroid can-

**Table. Rates of Intraocular Pressure Events 1 to 7 Days After Injection<sup>a</sup>**

Triamcinolone Acetonide Injection Dosage	No. of Events/No. of Injections (%)					
	Baseline Visit, Initial Injection	4-mo Visit	8-mo Visit	12-mo Visit	At Any Follow-up Visit, Subsequent Injections	At Any Visit, Initial or Subsequent Injections
1 mg	2/249 (0.8)	1/168 (2)	2/114 (2)	0/89 (0)	4/546 (0.7)	6/795 (0.7)
4 mg	1/244 (0.4)	2/116 (0.9)	3/105 (3)	1/79 (1)	8/471 (2)	9/715 (1)

<sup>a</sup>Intraocular pressure event is defined as a 4-day postinjection visit intraocular pressure of 30 mm Hg or higher that also increased 10 mm Hg or more from the preinjection intraocular pressure.