rechallenge with the drug. The fluctuations in cyst size following initiation and discontinuation of bimatoprost strongly indicate that this adverse effect can be caused by other topical prostaglandin F₂α analogues as well.

Ultrasound biomicroscopy demonstrated that the patient had a large iris pigment epithelial cyst. However, the small residual cyst at the iridociliary junction raises the question of whether this was a secondary iris cyst arising de novo after administration of latanoprost or a preexisting primary cyst where only its volume was influenced by the eye drops. In both circumstances, the increased uveoscleral outflow may have contributed to cyst formation by changing the fluid dynamics through the interepithelial space of the posterior iris. In theory, the drugs could also have acted directly on the cyst-lining epithelial cells and thereby increased intracavitary fluid secretion. As anterior uveitis has been associated with the use of prostaglandin F₂α analogues, an alternative mechanism of induction of the cyst could be inflammation due to subclinical uveitis.

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Comment. Although ciliary body melanomas are less common than their more posterior counterparts, the prognosis for metastases is worse. This is likely owing to the larger average size of the tumor at detection as well as the association with more malignant cell types. Even with treatment, the rate of metastasis at 5 years is 28%.

Ciliary body melanomas can remain hidden from the eye care provider owing to their location posterior to the iris. Patients often become symptomatic only after the tumor becomes large enough to cause cataract formation or lenticular astigmatism or to displace the crystalline lens.

Uveal Melanoma Masquerading as Pigment Dispersion Glaucoma

A 64-year-old white woman from an outside ophthalmologist had a history of pigment dispersion glaucoma unresponsive to medical therapy in the right eye. She was subsequently found to have a ciliary body melanoma and was sent to our ocular oncology clinic for further evaluation. The clinical course and outcome are described.

Report of a Case. The visual acuity in the affected eye was 20/60 OD with an intraocular pressure of 38 mm Hg and an elevated lesion beneath the peripheral iris at the 2-o’clock position. The left eye was normal.

In the right eye, the peripheral iris and anterior lens capsule were covered by a fine dusting of pigment (Figure 1). There was a small amount of corectopia superonasally. On gonioscopy, the angle was narrowed superonasally and there was intense, homogeneous pigmentation of the trabecular meshwork for 360°. Her contralateral eye had a small iris nevus but was otherwise normal.

Dilated examination of the right eye revealed a mass involving the ciliary body and posterior iris at the 2-o’clock position. There was evidence of direct tumor extension into the angle in the area of narrowing. Transillumination revealed no evidence of a ring melanoma. The vitreous was clear and the posterior pole was otherwise normal.

High-frequency ultrasonography revealed a mass centered in the ciliary body with low internal reflectivity. The tumor measured 12.0 × 7.9 mm in basal dimension with a height of 3.3 mm.

The patient was diagnosed with a ciliary body melanoma involving the iris and angle with secondary melanomalous glaucoma. The systemic workup results were normal. The eye was enucleated based on patient preference. Histopathological analysis revealed a ciliary body melanoma of the mixed cell type. The tumor involved the iris root and angle with tumor seeding of the anterior segment. There was posterior extension of the tumor as well (Figure 2).

Figure 1. Slitlamp photographs of the right (A) and left (B) eyes showing the pigment on the anterior surface of the iris in the right eye. The arrow denotes the location of the tumor.
The tumor can also invade the visual axis. Most of these tumors are not detected until their height is greater than 7.0 mm. Earlier diagnosis has the potential to reduce the risk of metastasis.

Secondary glaucoma is a well-known complication of uveal melanomas. It is more common in eyes with ciliary body involvement, occurring in up to 17% of these patients. The most common mechanisms for glaucoma in this setting include pigment dispersion and direct tumor invasion of the angle. Melanomalytic glaucoma occurs when macrophages engulf the uveal pigment and block the trabecular meshwork. Choroidal melanomas can also cause neovascular glaucoma or angle closure from forward displacement of the lens-iris diaphragm.

Ciliary body melanomas with iris involvement have been treated successfully with whole anterior segment brachytherapy. Other treatment options include external beam radiotherapy, proton beam therapy, and enucleation.

In conclusion, we describe a patient with a ciliary body melanoma, suspicion for this entity should be maintained in cases of unilateral glaucoma with heterochromia.

Retinal Vessels and Retinopathy of Prematurity

Rabinowitz and colleagues report that wider retinal arterioles and venules in high-risk preterm infants are associated with increased risk of progression to severe retinopathy of prematurity (ROP). In adult persons with diabetes, similar findings have also been observed with regard to diabetic retinopathy, where wider retinal arterioles and venules may predict an increased risk of both the incidence and progression of retinopathy. This similarity supports the concept of shared mechanisms in the pathogenesis of ROP and proliferative diabetic retinopathy. The association of both diseases with venular dilation is particularly noteworthy as this sign may be a marker of endothelial dysfunction and inflammation, processes which may be prominent in both diseases.

An important consideration that was not addressed by the study was the effect of ocular magnification on the measurements of retinal vessel diameter. We have previously shown that eyes with high ocular magnification (ie, myopia) may appear to have spuriously narrower retinal vessels when measured from photographs. Similarly, we have recently demonstrated in young children that correction for magnification resulting from refractive error of the eye eliminates spurious associations of retinal vessel diameters with ocular biometry and other eye characteristics. There are reports that eyes with ROP are more likely to have refractive error, highlighting the need to correct for ocular magnification in those at risk of ROP. In view of these factors, we encourage the authors to account for the effects of ocular magnification in their analysis and interpretation of retinal vessel measurements.

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