the Poliner *et al*[12] series of 13 cases of RD treated with pneumatic retinopexy, two cases had new retinal breaks adjacent to the original tears and two cases had new retinal breaks 5–6 clock hours away from the original tears. They postulated that the buoyant gas bubble created vitreous traction on the inferior retina in the meridian of the involved tears. Snead[13] has suggested that a gas bubble expanding behind a detached posterior hyaloid membrane may be particularly likely to cause such breaks. In our patient, a new U-shaped tear 6 clock hours away from the original tear caused a second RD. This suggests that the original explant had been relieving trans-vitreous traction, and following explant removal the recurrence of this vitreous traction caused a new tear. It is tempting to speculate that the PVD 6 years previously was incomplete, accounting for both the delayed presentation of the original RD, and also the persistent vitreo-retinal traction leading to a new RD after explant removal.

New retinal detachment following scleral explant removal is rare, and is likely to be at the area of maximal vitreous traction either around the original hole or approximately 180° away from it.

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Sir,

Unilateral pellucid marginal degeneration

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Pellucid marginal degeneration (PMD) is a rare bilateral corneal disorder characterised by thinning in the peripheral portion of the inferior cornea with marked steepening just superior to the thinned zone.[1] It is differentiated from other peripheral corneal thinning disorders such as Terrien's marginal degeneration and Mooren's ulcer by the absence of vascularisation, lipid infiltration, or corneal ulceration.

Unilateral isolated PMD is extremely unusual, and corneal topography provides valuable clues in suspected cases. Described here is such a case, in which the other eye was normal.

Case report

A 46-year-old healthy Indian man presented with painless progressive diminution of vision in the right eye for 6 years. There was no history of redness, pain, or use of ophthalmic medication during this time. He was otherwise healthy.

Ophthalmic examination revealed best-corrected visual acuities of 6/18 OD with $-1.0/-13.50\,\mathrm{D} \times 110^\circ$ and 6/6 OS unaided. On slit-lamp biomicroscopy, the cornea in the right eye showed an irregular contour with a thin band inferiorly, approximately 1.5 mm in width and 2 mm from the limbus, with bulging above the thinned zone (Figure 1, top). The portion between the thinned area and limbus was normal in thickness. There

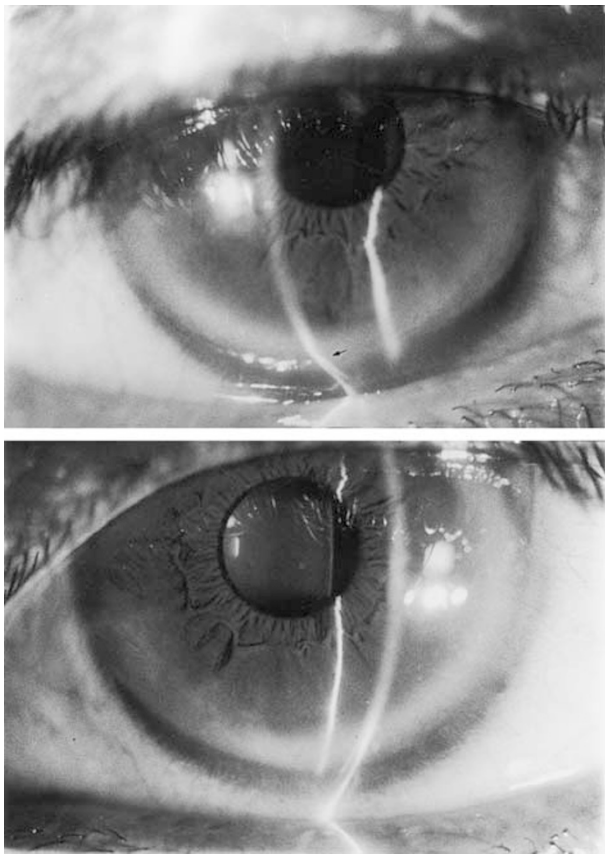

Figure 1 Top: slit-lamp photograph of the right eye showing inferior steepening (arrow), with a clear zone between limbus and steep band. Bottom: slit-lamp photograph of the left eye showing normal corneal curvature.

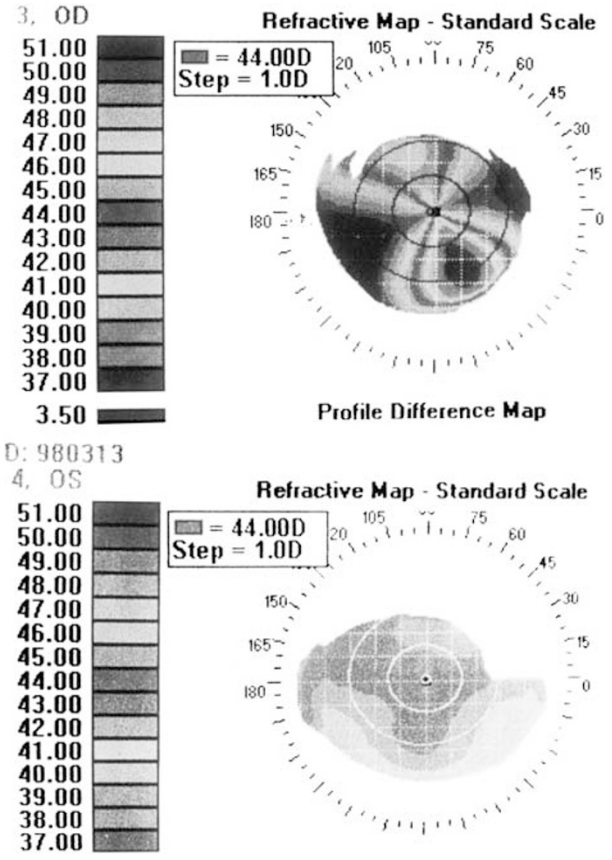

Figure 2 Top: videokeratograph of the right eye showing the characteristic bow-tie appearance of corneal steepening (red zones) and midperipheral inferior corneal flattening. Bottom: videokeratograph of the left eye showing normal corneal contour.

was no evidence of iron lines, lipid deposition, or vascularisation. The rest of the anterior and posterior segment was normal. The intraocular pressure by applanation tonometry was normal in both eyes. The left eye was normal, with no evidence of corneal thinning, striae, or abnormal protrusion (Figure 1, bottom).

Keratometric readings were $50.00\,D \times 20^\circ / 41.00\,D \times 111^\circ$ in the right eye, and $43.00\,D \times 95^\circ / 44.00\,D \times 179^\circ$ in the left eye. Corneal topography in both eyes was assessed by computerised videokeratoscopy using Holladay Diagnostic Summary analysis maps. In the right eye, there was a bow-tie-shaped against-the-rule astigmatism measuring +9.30 D at 23° (Figure 2, top), while the left eye showed a regular cornea with astigmatism measuring +0.97 D at 17° (Figure 2, bottom). This clinical picture was consistent with a diagnosis of pellucid marginal degeneration of the right eye.

During the follow-up period in the last 30 months, repeated contact lens trials with different sizes of gas-permeable contact lenses have been unsuccessful. Sequential keratometric readings at 6-month intervals revealed a fairly regular against-the-rule astigmatism with a trend towards increasing steepening around the 20° meridian in the right eye, with no change in the left eye. The patient is presently on a regular follow-up, and corrected to 6/24 with spectacles in the right eye. The left eye does not show any feature of peripheral corneal thinning.

Comment

Pellucid marginal degeneration is a bilateral, slowly progressive condition classically described between the second and fourth decades. This rare entity has been postulated to be an abnormality of the connective tissue,[2,3] but the exact pathogenesis is still unknown.

Topographic analysis in our case revealed a characteristic bow-tie appearance of marked against-the-rule astigmatism oblique-inferiorly, without peripheral steepening. Stromal thinning is known to cause corneal flattening over the area of tissue loss, and steepening at

the border of unaffected tissue.[4] This results in a relatively steep contour approximately 90° away.[4,5] The topographic pattern described is distinctly different from that seen in keratoconus, in which a small area of high corneal power is surrounded by concentric bands of low corneal power.[6]

These characteristic features help to differentiate this condition from other noninflammatory corneal thinning disorders such as keratoconus, posterior keratoconus, and keratoglobus. It also needs to be differentiated from peripheral corneal disorders associated with inflammation such as Terrien's marginal degeneration, Mooren's ulceration, and ulcers associated with connective tissue disorders.

The case reported highlights the rare occurrence of unilateral PMD. Though bilateral conditions do present asymmetrically in degree or time period, the left eye in this case has not shown any sign of the disease 11 years after the right eye started becoming symptomatic. Two cases of unilateral isolated PMD have been reported so far by Wagenhorst[7] and Basak *et al*.[8] The first was in an elderly black patient, while the second was an Indian patient similar to the case described. Another series by Biswas *et al*[9] describes 16 patients with pellucid marginal degeneration, of which it was unilateral in three patients.

To the best of our knowledge, this is the sixth such patient reported so far. Peripheral corneal thinning disorders are a group of distinct entities with differing implications for management. They need to be recognised and differentiated from each other. Topographical analysis is an invaluable tool that may help confirm a clinical suspicion.

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Sir,

Miragel explant fragmentation 10 years after scleral buckling surgery

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Long-term complications are known to be associated with hydrogel explants.[1–4] We would like to present a patient with severely restricted eye movements 10 years following the use of Miragel explant (from MIRA, 87 Rumford Avenue, Waltham, MA 02454, USA).

Case report

A 66-year-old man had two scleral buckling surgeries for a right rhegmatogenous retinal detachment 10 years previously. He was referred for increasing binocular diplopia over the past 12 months.

On examination, his visual acuity was 6/18 OD and 6/12 OS. There was a large swelling over the superotemporal aspect of the right globe. On palpation, it was not possible to reach the posterior extent of this swelling. The eye was hypotropic and esotropic, and the extraocular movements were limited in all directions, especially abduction and elevation. Orthoptic assessment showed the deviation to be 8Δ esotropia, 4Δ L/R and 20Δ of excyclotorsion (see Lee's Chart, Figure 1a).

A provisional diagnosis of mechanical restriction was made, and we decided to explore and remove the surgical explant in the first instance.

At surgery, forced duction tests confirmed the diagnosis of mechanical restriction. It was found that the explant was covered by a thick fibrous capsule, and when the explant was exposed, it had a straw-colour, opalescent and gel-like appearance. It was not possible to purchase the explant with forceps as the material was extremely friable and tended to disintegrate. Eventually, we found that the best way to remove the surgical