Persistent pupillary membrane

A five year-old boy was referred to our hospital by an optometrist because of low vision. Slit lamp examination revealed severe thick pigmented persistent pupillary membrane (PPM) in both eyes (Figure 1). There were some points of attachment between membranes and lens, concerning the risk of cataract formation in the case of surgical removal. His visual acuity (VA) was 20/100 and 20/50 without correction of the refractive error, 20/60 and 20/40 with correction, respectively in the right and left eye. With regard to acceptable correction of VA by mydriatics, we opted to do a close follow-up. At 1 year follow-up VA was 20/30 in the right and 20/25 in the left eye obviating the need for surgical intervention.

Pupillary membranes are frequently encountered in infants, though they are more common in premature babies. They present the remnants of anterior tonica vasculosa lentis and their regression generally begins from the sixth month of gestation which leads to complete disappearance at eighth month.1 When present after birth, they still continue to regress in the first year of life.3 However in some cases a thick membrane persists which may necessitate treatment. PPMs usually have no impact on vision except for cases with a pupillary opening of <1.5 mm in which decreased retinal illumination and diffraction results in impaired vision.5 Treatment of PPM depends on the extent of the membrane and the size of pupillary opening. While small PPMs can be followed up without any intervention, some cases may require employment of mydriatics, correction of refractive error and patch-therapy for amblyopia.4 Nd:YAG laser can be applied for the disruption of the PPM however because of the probability of the presence of blood vessels it is accompanied with the risk of developing hyphema and subsequently cataract.6 Finally, in some cases surgical excision of the membrane may be beneficial6.

Although visual prognosis for properly managed patients is favorable, close follow-up of VA is needed since there is a chance of deprivation amblyopia.6

Our case represents a PPM with acceptable pupilary opening in whom appropriate management resulted in good final vision.

Figure 1. (A and B) PPM in both eyes.
Conflict of interest: None declared.

References


