Letters to the Editors

Traumatic Optic Neuropathy in a 17-Year-Old Football Player

To the Editors:

This letter reports a case illustrating an indirect traumatic optic neuropathy occurring from a dangerous pre-game sporting ritual. Our hope is that awareness of this activity and its danger may prevent its unnecessary recurrence.

A 17-year-old male football player sustained a blunt traumatic head injury that occurred from a seemingly harmless and increasingly common activity, head bunting onto a fellow player’s shoulder pads during the pre-game warm up. The patient reported that as his fellow players ran past him, he smashed his unprotected head into their shoulder pads. He noted the immediate onset of blurred vision of his left eye following the blunt blow to his left forehead. During the next 5 minutes, he reported progressive and severe visual loss in the left eye.

Initial examination 3 hours after the onset of injury revealed corrected visual acuity of 20/20 in the right eye and an island of light perception visual acuity in the left eye. External examination was unremarkable. Extraocular motility was normal for both eyes. Pupillary responses revealed an afferent pupillary defect in his left eye. Gross visual field testing was normal for the right eye and markedly constricted for the left eye. Slit-lamp biomicroscopy was normal for each eye; there was no evidence of traumatic iritis. Intraocular pressures were 17 mm Hg in both eyes. Posterior segment examination was unremarkable in the right eye and revealed retinal edema in the left macula and an intraretinal hemorrhage extending from the optic disc temporally.

Orbital computed tomography was unremarkable, showing no intracranial or orbital fractures and no displacement of the optic nerve. The diagnosis of indirect traumatic optic neuropathy was made. Initial therapy included intravenous methylprednisolone, 30 mg/kg loading dose followed by 5.4 mg/kg/hr for 23 hours as used in the International Treatment of Optic Neuropathy Study.1 This treatment did not result in any visual improvement. Follow-up examinations during the following 4 months revealed no change of his visual acuity in the left eye and progressively increasing optic disk pallor (Figs. A and B). Optical coherence tomography (OCT) revealed thinning of the peripapillary retina in the left eye compared with the right eye, confirming permanent loss of the retinal nerve fiber layer (RNFL) (Figs. C and D).

The OCT findings of decreased RNFL thickness are consistent with a previously published case of a direct traumatic optic neuropathy in which the optic nerve was completely severed and progressive RNFL loss occurred.2 In this case, no radiological evidence existed of direct optic nerve injury. The end result of RNFL loss suggests a common feature in both direct and indirect traumatic optic neuropathy consisting of cell death and neuronal atrophy. Similar decreases of RNFL layer thickness on OCT have also been reported in nonarteritic anterior ischemic optic neuropathies.3

It is important that pediatric ophthalmologists be aware of this dangerous practice of head bunting and its association with indirect traumatic optic neuropathy. Consideration should be given to counsel

Figure. Fundus photographs at 4 months post-injury show (A) the normal right optic nerve and (B) permanent left optic nerve atrophy with significant pallor of the nerve head. Optical coherence tomography (OCT) demonstrates a cross-sectional recreation of the optic nerve head at 4 months showing (C) normal retinal nerve fiber in the right eye and (D) loss of nerve thickness in the left eye. OCT analysis classifies the retinal nerve fiber layers thickness compared with age-controlled normal subjects. The right eye (E) demonstrates normal thickness, whereas the left eye (F) shows pronounced thinning throughout.
athletes to avoid unprotected head trauma, including the activity described in this case, to mitigate the possibility of indirect traumatic optic neuropathy.

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A Survey of Ophthalmology Residents’ Attitudes Toward Pediatric Ophthalmology

To the Editors:

We read the article by Hasan et al.1 with interest. In India, we also believe fewer ophthalmology residents choose to pursue pediatric ophthalmology and adult strabismus as their subspecialty. Apart from lower income and challenges in examining a child, we believe there are a few more potential reasons that make a resident hesitant of choosing this subspecialty.

First, many pediatric ophthalmology programs are reduced to strabismology programs. The children suffering from other diseases (eg, congenital ptosis, congenital glaucoma, and retinopathy of prematurity) requiring intervention are referred to other departments either directly or routed through the pediatric ophthalmology department for further management. This certainly leaves lacunae in the training of a complete pediatric ophthalmologist. In many programs, a resident has a rotation in those departments; however, the approach to children’s eye diseases in those departments is radically different than what is found in the pediatric ophthalmology department.

Second, training a complete pediatric ophthalmologist involves developing and mastering skills in far more subspecialties (eg, cataract, refraction, strabismus, neuro-ophthalmology, genetics, oculoplastic s, and retina). Everything and anything in a child younger than 16 years needs to be managed by the same physician, demanding varied and superior clinical and surgical skills that require more intensive and possibly more prolonged training.

Third, compared to some other specialties (eg, phacoemulsification and refractive surgery) fewer surgeries are performed in the department of pediatric ophthalmology. The lower surgical rate is due to a lower percentage of ocular diseases requiring surgery in children and, overall, a lower prevalence of the eye diseases per se; strabismus, the most common eye disease requiring surgery in children, is not a blinding or painful condition and hence many parents do not elect surgery. Also, the parents are worried about the child’s young age, which increases the risk of anesthesia. A few diseases would go undetected or unattended due to lack of complaints or handicap in the child. In a few places, it is simply lack of awareness about availability of safe and effective procedures for childhood eye diseases that reduces the surgical rate. This reduced number of surgeries has two negative effects on a surgeon: it reduces the financial returns and it reduces the action (professional satisfaction).

Finally, few programs exist in India for training in pediatric ophthalmology and strabismus compared with other subspecialties. With a population of 1 billion, the demand for any educational subspecialty training is higher than the supply; hence none of the programs go without a match. However, we do not find enthusiasm among the ophthalmic residents to pursue pediatric ophthalmology when compared to many other ophthalmic subspecialties.

REFERENCE

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