Structural and functional outcomes of premature infants screened for retinopathy of prematurity in a tertiary-care hospital in Malaysia

May Me Choy1, U-ten Chen, Nurliza Khaledin, Ayu Saad Mes
1University of Malaya, Kuala Lumpur, Malaysia

Objective

It is established that premature infants with retinopathy of prematurity (ROP) require long term follow-up for refractive errors and other complications. It is not certain premature infants without ROP require the same follow-up methods.

Methods

A hospital-based cohort, observational study was conducted to assess functional and structural outcomes of premature infants with and without ROP at 1 year post-conceptive age (PCA). Sixty six infants admitted to NICU from Jan to Dec 2007 underwent screening for ROP. They were examined at 1 year PCA. Functional outcome was based on assessment of fixation, presence of nyctalopia or strabismus, monocular grating acuity by "teller acuity chart. The structural outcome referred to the appearance of the fundus and cycloplegic refraction. The results were recorded as favourable and unfavourable based on criteria used in the CryoROP study. Data were analyzed with SPSS 12.0. Chi-square, student t and Pearson correlation tests were used, and p < 0.05 was significant.

Results

The incidence of ROP in this study was 28.8% (19/66). Mean birth weight was 1201±560.9 grams and mean gestation was 29.2±2.2 weeks. Nineteen patients had ROP, 13 regressed spontaneously, while 6 required laser. No stage 4 or 5 were seen. There was no significant difference in the functional and structural outcomes at 1 year PCA in infants with and without ROP. No abnormal fixation, nyctalopia or strabismus was recorded. Statistical tests did not show association between functional and structural outcomes in patients treated for ROP and patients in whom ROP spontaneously regressed. There was no statistically significant relationship between spherical equivalent in patients with or without ROP. Hypermetropia was the most common refractive error observed at 1 year PCA. The incidence of hyperopia for all patients (n=66) was 71.2%, 47/66. The incidence for infants with ROP was 73.7% (14/19) and for infants without ROP was 70.2% (33/47), p=0.32. Nyctalopia was observed in 3 (15.8%), 3/19 infants with ROP but was seen in 9 (23.4%), 11/47, p=0.08 infants who didn’t have ROP.

Conclusions

There was no difference in the functional and structural outcomes in patients with and without ROP or between patients who received treatment and those whose disease spontaneously regressed. In this study, the incidence of nyctalopia was higher in infants without ROP than those with ROP. Long term follow-up is warranted in all premature infants who required screening for RCP.

The Factors affecting Pattern Visual Evoked Potential in Amblyopes

Jun-ho Choi, Sun-young Jang, Song-hee Park
Seoul National University Hospital, Seoul, Korea

Objective

To identify factors affecting the P100 amplitude of pattern visual evoked potential (pVEP) in amblyopes.

Methods

This retrospective comparative study included sixty-six patients who had treated with refractive correction and/or occlusion therapy for amblyopia (strabismic, anisometropic and isometropic). The patients were divided into two groups based on P100 amplitude of pVEP. Group 1, P100 amplitude of non-amblyopic eye was less than amblyopic eye; Group 2, P100 amplitude of non-amblyopic eye was equal or more than amblyopic eye). For each patient, best corrected visual acuity (BCVA), refractive error and stereoview at initial diagnosis were examined.

Results

There was no significant difference in the median age, sex ratio, laterality, stereoview and BCVA of each eye between group 1 (n=30) and group 2 (n=36). The P100 amplitude of non-amblyopic eye in group 2 was significantly smaller than that in group 1 (p=0.003). The P100 amplitude of non-amblyopic eye was correlated with the difference of spherical equivalent between non-amblyopic eye and amblyopic eye. (r=-0.419, p=0.000)

Conclusions

The difference of spherical equivalent between non-amblyopic eye and amblyopic eye may affect the P100 amplitude of pVEP. In interpreting pVEP of amblyopes, other clinical findings have to be considered.
P-MO-279

Pediatric Ocular Trauma: The Analysis of Causes and Outcomes from a Tertiary Eye Centre in Eastern India.

Atadha Das, Kumar Saurabh, Sudipta Das, Deepak Agrawal
Jankaria Nethralaya, Kolkata, India

Objectives
Eye injuries are an important cause of ocular morbidity in children. Such injuries cannot always be prevented but by identifying the underlying etiology, it may be possible to determine ways of reducing the incidence of visually damaging trauma. With this background, an analysis was done to investigate the causes and outcomes of Paediatric ocular trauma presenting to a Tertiary Eye Care Center in Eastern India.

Methods
A retrospective analysis of all eye injuries in children presenting at a tertiary eye care centre in India from August 2008 to November 2009 was done. A total of 34 children sustaining any form of eye injury during this time period were included. The detailed history and examination details that were recorded were age, gender, mode, place and type of injury, time interval between insults to reporting time, anterior segment and posterior segment status including presence of endophthalmitis, treatment instituted, and the final visual outcome at the end of 6 weeks.

Results
The age group of children ranged from 1-15 years. 24(70%) of the children were male and 10(30%) were females. Commonest mode of injury was by a stick (32%), followed by needle (15%) and glass (12%). In 30(88%), the type of injury was penetrating and only 4(12%) were due to blunt trauma. In this study the commonest place of injury was home n 20 (59%) children followed by playground. The range from insult to reporting time was day to 1 year. The presenting visual acuity ranged from 0/18 to no perception of light. 23(68%) children underwent primary wound repair, 2(6%) required hyphema drainage, 5(15%) needed lensectomy and 16(47%) of children had endophthalmitis on presentation who required immediate vitrectomy. Only 2 children needed enucleation. At the end of 6 weeks the best corrected visual acuity was central steady and maintained in 36%, ane of 0/60 to 6/18 in 8 (23.5%) children, 6/9 in 5 (14%) children, counting fingers to perception of light in 14(41%) children and only 4(12%) had no perception of light.

Conclusions
From this study the boys were more prone to injury compared to girls with most common site of injury being home. Most of the injuries were of penetrating in nature. Traumatic endophthalmitis occurred in almost half of the children in this series and early intervention increased chances of better prognosis in terms of visual outcome.

P-MO-280

Predicting visual outcome after an open globe injury using ocular trauma score (OTS)

Gowri Supramaniam1, S. E. Khor2, M. M. Choo3, Bethel L Livengood2
1 Tun Hua KPT Kapany University, Malaysia Medical Centre, Seremban, Malaysia
2 Tzu Chi Eye Hospital, Seremban, Negri Sembilan, Department of Ophthalmology, Seremban, Malaysia
3 University Malaya Medical Centre, Department of Ophthalmology, Seremban, Malaysia

Objective
To compare the visual outcome after an open globe injury in our centre with OTS score. OTS (Ocular Trauma Score) was developed to serve as a tool to predict patient's visual outcome six months after injury.

Method
This study was a retrospective analysis of open globe ocular injuries from January 2006 to March 2009 in Hospital Tzu Chi, Seremban. Outcome measures were OTS score, globe rupture, endophthalmitis, perforating injuries, retinal detachment, relative afferent pupillary defect and visual outcome at 6 and 6 months post trauma. OTS score was calculated at the initial time of presentation based on the injuries sustained. The visual outcomes of the patients at 6 months were then compared to the visual outcome in the OTS study group.

Results
40 eyes from 40 patients with available data were analyzed. The OTS score assessment among our patients showed similar outcome to the actual OTS score in the groups who scored better than 65 in the raw score sum. For those who scored 65 and below their actual visual outcome was better than the predicted visual acuity. Majority of our patients were Malays 23(57.5%); others were Indians 10(25%), foreigners 4(10%) and Chinese 3(7.5%). Globe rupture were present in 9(22.5%) patients, endophthalmitis in 9(22.5%), perforating injuries 2(5%), retinal detachment 6(15%) and RAPD 6(12.5%) patients.

Conclusion
Our study showed that OTS score can be used to predict patient's visual outcome if they scored a raw score sum of 65 and above.

P-MO-281

Severe self-induced ocular mutilation as the first episode of psychosis

Jagnjot Holzmannov, Lisa Catherine Byton Diaz, Marketa Machackova, Michalova Tolkova
Department of Ophthalmology, University Hospital, Hradec Kralove, Czech Republic

Objective
To report a case of self enucleation as the first form of psychosis.

Methods
Self enucleation is a rare form of self mutilation, occurring with paranoid delusions, as a result of drug-related toxic psychosis or in functional psychoses, especially schizophrenia. We report a case of self enucleation of a left eye in a 28 year old male. The patient had no known past psychiatric disorders.

Results
The patient had removed the eye by a fork. On examination, the left completely enucleated globe was intact with a 4.5 cm long avulsed optic nerve. CT scan demonstrated left cleft without the left globe and optic nerve, only haematomas and air were present. There were no intracranial complications. The right eye was intact. Its visual functions were normal. The patient was admitted to the psychiatric department and a diagnosis of paranoid schizophrenia was made.

Conclusions
In the management of such patients close co-operation between ophthalmologist, psychiatrist and neurosurgeon is important, as further self injury, including suicide is common.

P-MO-282

Soccer-related ocular trauma in a tertiary ophthalmologic center in Brazil

Cristina Miyamoto, Elizabeth Nogueira Martins
Federal University of São Paulo, São Paulo, Brazil

Objective
This study aims to evaluate the severity of soccer-related ocular injuries attended in an emergency unit of a tertiary ophthalmic center.

Methods
Retrospective study. Medical charts of patients seen at the Ophthalmic Emergency Room, Department of Ophthalmology, F from Jul/2007 to Sep/2009 were reviewed. Data on visual acuity, age, mechanism of trauma and ophthalmologic alterations were collected.

Results
105 patients were identified. Most patients were male (95.89%). Median age was 27 years (range 9 to 61 years). Thirty-three (16.92%) were under the age of 18 (median = 13 years) and four (2.00%) were 60 years or older (median = 76 years), who were spectators. Initial visual acuity varied from hand motion to 20/20 (median = 19/20). The right eye was affected in 52.92% of cases, and in 20.00% both eyes were injured. Most patients (60.51%) presented alterations in the anterior segment (keratitis, hyphema, traumatic uveitis, conjunctival injuries) and in 84 (43.07%) lesions were detected in the posterior segment (commotio retinae, vitreous hemorrhage and/or retinal detachment). Injuries to soft tissues were observed in 86 patients (29.74%). Soccer ball was directly involved in the trauma in 83.07% of the cases.

Conclusions
The results indicate that soccer-related ocular trauma is often severe and ophthalmologic evaluation should be warranted to these patients. All victims must be evaluated, regardless of good presenting visual acuity, to promptly detect and manage potential injuries. The data corroborates the value of protective eyewear designed specifically for soccer that should be recommended especially for players who wear prescription lenses, functionally one-eyed athletes (those who have a best corrected visual acuity of worse than 20/40 in the poorer-seeing eye), and those who have had eye surgery or trauma to the eye that may have weakened eye tissue. Soccer spectators also need to protect themselves.