

Selected Abstracts from the Orthoptics Australia 67th Annual Scientific Conference held in Adelaide 21-24 November 2010

OPENING ADDRESS

David Ben-Tovim

A clinical professor of psychiatry at Flinders University School of Medicine, Professor Ben-Tovim is the director of redesigning care at Flinders Medical Centre. His role involves delivering safe hospital care and has mapped the way patients progress through the hospital system, from entering emergency, being admitted to wards and leaving the hospital. Prof Ben-Tovim has been able to improve the cost, delivery and quality of service delivery by applying the LEAN process.

PATRICIA LANCE LECTURE THE PUPIL: MORE THAN THE APERTURE OF THE IRIS DIAPHRAGM

John Crompton

The pupil is more than the aperture of the iris diaphragm; it is a kinetic indicator of the functional state of the retina and surrounding tissue. Its three major optical functions are: (i) to regulate the amount of light reaching the retina, (ii) to diminish the aberrations (chromatic and spherical) produced by imperfections in the cornea and lens, and (iii) to increase depth of focus (Glasser 1978). Simple clinical procedures enable evaluation of the complex neural mechanism controlling pupillary size and reactivity, between the retina tectum and III nerve. Added to these are the state of retinal light adaptation, supranuclear input from frontal and occipital cortex and the brain stem reticular formation. No wonder the "awake pupil" is in constant hippus. This lecture will illustrate the clinical importance of looking at the pupil (Casson & Crompton 1978; Casson & Crompton 1999).

ANZSOPICAM ONE-YEAR RESULTS

Tanya Pejnovic, William Campbell, John McKenzie

Purpose: ANZSOPICAM is an investigator-initiated prospective multicentre clinical trial of photodynamic therapy in choroidal amelanotic melanoma. This paper summarises the one-year results.

Method: Patients presenting with posteriorly located amelanotic melanoma were recruited into the study. After full ocular and systemic assessment, photodynamic therapy was applied with the Zeiss Visulas laser, using verteporfin as the photosensitiser. PDT was repeated at three-monthly intervals until the melanoma had completely regressed.

Results: Sixteen patients were recruited in the first year. All the melanomas have demonstrated a response. Complete regression of the tumour has been achieved in 10 patients to date, six after just one treatment and four after two. None have developed recurrent tumour or systemic metastatic disease so far, but one patient, an 85 year old male, died of an unrelated condition three months after PDT.

Conclusion: The one-year results indicate PDT is effective in causing regression of amelanotic melanoma without compromising vision. The study is ongoing.

ADVOCACY IN STROKE

Neryla Jolly, Ann Macfarlane, Kathryn Thompson

Advocacy is a term that is linked to legal, political and social issues. Dictionary definitions refer to advocacy being used to provide information to a patient to enable a decision to be made or a series of actions to change "what is" to "what should be" (Wikipedia). It can question the way current events are occurring; participate in agenda-setting by raising significant issues, target issues, propose solutions, open the solutions for acceptance, defend or promote a cause, plead in favour of a situation, recommend (Cassells) and urge by argument (Macquarie Dictionary).

This presentation will highlight the orthoptist's role as an advocate, citing the outcomes from a study of 150 patients admitted for care in a stroke unit. Some of the outcomes include: (i) use of spectacles to improve poor visual acuity to normal levels to assist daily activities, (ii) modification of spectacles to match changed ocular movement patterns and assist ocular comfort, (iii) use of abnormal head postures to avoid diplopia, (iv) refer a previously undiagnosed ocular condition for the correct form of ophthalmic treatment to restore ocular comfort and full visual function, (v) referral to agencies such as Vision Australia to achieve best outcome with the current decreased vision and (vi) charting in the hospital records the eye medications required for the ongoing treatment of chronic eye conditions.

Advocacy goes further than testing and reporting vision standards, it supports the patient to achieve better quality of life. Consideration of the orthoptist's role as an advocate reinforces that their unique skills and knowledge are of immense help to the patient and that this role needs to be emphasised.

A CASE OF CHRONIC PAPPILLOEDEMA IN A 9-YEAR OLD GIRL

Fiona Gorski

A 9-year old girl from New Caledonia presented to the Eye Clinic at The Children's Hospital at Westmead following an urgent referral from the neurology department. Despite having reasonable vision, subsequent testing with Humphrey Field Analyser revealed remarkable field loss. Ophthalmoscopy revealed significant optic disc swelling. This patient's treatment and follow-up will be discussed.

THE GLAUCOMA REGISTRY

Jamie Craig

The Australian and New Zealand Glaucoma Registry has been established by A/Prof Jamie Craig and his team. The Registry is funded by the Eye Foundation which is affiliated with the Ophthalmic Research Institute of Australia and the Royal Australian and New Zealand College of Ophthalmologists. The purpose of the Registry is to facilitate the identification of factors which contribute to a poor outcome for patients with glaucoma. Glaucoma blindness can in most cases be prevented if those at high risk of developing it are identified and treated appropriately at an early stage. Currently many people at high risk are asymptomatic in the early stages, and are not diagnosed until irreversible vision loss has occurred. Better identification of those people that are at high risk of glaucoma will result in an overall reduction of preventable blindness by treating the condition before any sight loss has occurred. Current research

at Flinders is unravelling the genetic contribution to a bad outcome, and the identification of patients who have progressive disease.

OVERVIEW OF JUVENILE IDIOPATHIC ARTHRITIS AND ITS OCULAR ASSOCIATIONS

Katie Scanlon, Stephanie Crofts

Juvenile Idiopathic Arthritis (JIA) is the most common form of persistent arthritis in children. Uveitis has a known association with JIA. JIA is a condition that requires a multidisciplinary approach to management, including regular ophthalmology reviews. A retrospective analysis of patients with JIA who presented to the eye clinic at The Children's Hospital at Westmead will be discussed.

IS AXIAL LENGTH THE MOST IMPORTANT FACTOR TO CONSIDER IN THE SILICONE FILLED EYE?

Aaron Woollard

Despite meticulous efforts to measure axial length in a silicone filled eye, a refractive surprise was the outcome. A number of lessons were learned from a young man with bilateral cataract secondary to multiple complicated retinal detachments bilaterally.

THE POTENTIAL IMPACT OF EYE DOMINANCE ON VISUAL REHABILITATION

Kerry Fitzmaurice, Natalie Costa

Eye dominance is a concept well recognised in the literature, however it is a factor rarely taken into account when performing procedures or providing strategies creating a potentially monocular visual situation. The literature contains a small number of reports on the confounding impact of eye dominance on eccentric viewing strategy and some reports of patients requesting treatment where pathology impacts the dominant eye. A small series of studies have suggested amblyopia may have a protective effect in relation to AMD, if this is the case a consequence would be the best potential eccentric viewing locus in the non-dominant amblyopic eye. A study was undertaken to explore the coexistence of amblyopia and AMD and further explore the potential impact of eye dominance on eccentric viewing training. Data from this study was combined with data from an earlier study on eye dominance giving a larger cohort sample.

One-hundred-and-thirty-one members of the Macular Vision Loss Support Society of Australia completed a screening questionnaire. Of these respondents, 20 met the criteria to participate in a follow-up assessment. Data from these 20 participants were combined with data of 19 participants from the earlier study.

Self-report from the 131 initial respondents indicated 4.6% had amblyopia. The best potential eccentric viewing locus was found in the non-dominant eye of 38.5% of participants from the combined studies. Some participants in both studies (20.5%) required occlusion to use vision in the non-dominant better acuity eye.

CHILDREN WHO LIVE WITH VISION IMPAIRMENT IN AUSTRALIA: FINDINGS OF THE AUSTRALIAN CHILDHOOD VISION IMPAIRMENT REGISTER

Sue Silveira

The Australian Childhood Vision Impairment Register is sponsored by the Royal Institute for Deaf and Blind Children, in partnership with children

who live with vision impairment, their families, teachers, low vision service providers and health professionals. The Register is supported by a database which captures details on Australian children with vision impairment. This represents the first time uniquely Australian data has been gathered and available.

The findings of the Register will be presented which includes prevalence of eye disease and vision impairment and details of support these children and their family's access. A new online forum for parents and children will also be discussed with useful resources for orthoptists to consider accessing as they support Australian children living with vision impairment.

A SPORTING VISION

Genevieve McMahon, Cem Oztan

Paralympic sport offers opportunities for elite athletes who are blind or vision impaired to compete in elite level competition. It exists to provide opportunities for athletes who have a competitive disadvantage in non-Paralympic sport.

The Australian Paralympic Committee (APC) is responsible for developing and strengthening pathways and opportunities for athletes in the nine Paralympic sports for athletes with a vision impairment that have programs in Australia. Through the work of APC vision-impaired classifiers, Talent Search Program, Paralympic Education Program (PEP) and key relationships with key disability and health sector organisations these pathways continue to develop.

To determine an athlete's eligibility for Paralympic sport, a group of officials, known as classifiers, assess athletes to determine how their impairment influences their sport ability, regardless of their level of training or development. Classification is used to group athletes with similar levels of impairment into classes for equivalent competition. In this way, classification ensures that winning is determined by athletic skill, fitness, power, endurance, tactical ability and mental focus, the same factors that account for success in sport for athletes who are able-bodied. The outcomes of Paralympic competition become based on athletic performance rather than on differences that exist in athletes' vision.

Orthoptists can play a pivotal role not only in the area of classification, but are also best positioned to promote opportunities that exist for people with vision impairment in Paralympic sport. The role of the orthoptist as a classifier will be presented.

EYEPLAYSAFE: AN INTERACTIVE WEB-BASED RESOURCE TO EDUCATE CHILDREN AND FAMILIES ABOUT EYE SAFETY

Louise Brennan, Sue Silveira

Eye injuries in children are common, despite the fact they are a group that should have high levels of supervision with little access to environments and implements which cause harm. Serious childhood eye injuries can have lifelong visual and psychological consequences.

Eyeplaysafe will educate children and families regarding potential eye risks and hazards in environments where it is known children have injured their eyes – home, school and sport. It further aims to develop the personal skills and behaviours of children to reduce the incidence of preventable eye injury.

Eyeplaysafe is a web-based interactive learning package. It utilises current technologies such as interactive whiteboards and has content and design based on current research into paediatric eye injury and the school curriculum. Delivery of the package is primarily through NSW primary schools; access is also available to children, families and the community via the internet. Components of the *Eyeplaysafe* interactive resource will be showcased along with the web address. The governance and development of *Eyeplaysafe* along with the evaluation process will be presented.

CHILD ABUSE AND THE ORTHOPTIST

Alex Levin

Child abuse is pervasive in human society around the world. Four to six percent of abused children will first present to the ophthalmologist. It is inevitable, that orthoptists who work with children, will encounter patients who are at risk or have already suffered from child abuse or neglect. Virtually every form of child abuse can potentially have ocular manifestations. Physical abuse may manifest with overt injuries such as bruising or eye trauma. Visual sequelae of brain injury from abuse may also include visual loss and strabismus. Child neglect may involve failure to comply with prescribed treatment such as patching. Covert sexual abuse may present as functional vision loss. Orthoptists may also encounter situations in which they feel that the parent-child interaction is worrisome. All medical professionals, including orthoptists, who work with children, are mandated reporters of child abuse in most countries and therefore must educate themselves about warning signs and strategies for action when abuse is suspected.

NEUROFIBROMATOSIS AND ASSOCIATED OCULAR MANIFESTATIONS

Fiona Gorski

Neurofibromatosis is a dominant genetic phacomatosis with variable expression. There are two types of neurofibromatosis, both of which have ocular associations. A case study and a retrospective cohort study of children with neurofibromatosis, seen within the eye clinic at The Children's Hospital at Westmead, will be explored.

THE STUDENT EVALUATION OF METHODOLOGIES FOR TEACHING CLINICAL SKILLS

Irina Sim, Neryla Jolly, Phillipa Loxton, Kathryn Thompson

"Clinical" is a term used to describe the end result of the health educational experience. It takes its root from "klinikos" a Greek word which means 'around the bed'. In reality there is a knowledge component, a manual or doing component and when effectively used with the patient a combination of both the knowledge and the manual component referred to as a psychomotor skill.

The purpose of this presentation is to raise the teaching methods that are used by academics and practitioners when assisting students to learn clinical skills. Once the methods have been established then a framework will be set up for the students to evaluate the methods that assist them to learn most effectively.

Different models of teaching clinical skills will be described. A range of teaching methods used at the university and in the clinical environment will be raised and analysed against the teaching models. Participants will be invited to raise other methods currently being used. Following the conference, a tool that evaluates the different methods will be developed. The tool will be based on a Likert scale and provide an opportunity for comment. The results will be fed back to the next conference.

NEW ORTHOPTIC EDUCATION AT LA TROBE UNIVERSITY

Zoran Georgievski

Orthoptic education at La Trobe University has changed. We are responding to the growing need for eye care provision by enhancing orthoptic education and so enabling orthoptists to play a greater role than previous in the management of eye disease and people who are at risk of developing eye disease and vision loss.

The La Trobe program is of 4 years duration leading to a Bachelor of Health Sciences/Master of Orthoptics combined degree, with the possibility

of graduate entry into the Master program of 2 years. The aim of this presentation is to outline the main streams of study through the course, including ophthalmic disease and therapeutics, 'traditional orthoptics', and the clinical education structure and provisions.

ENDOTHELIAL KERATOPLASTY

Richard Mills

Endothelial keratoplasty is a surgical technique for the replacement of the corneal endothelium entirely through a limbal scleral tunnel incision. This technique eliminates the need for any corneal incisions or sutures, and preserves the corneal surface from limbus to limbus. It therefore allows preservation of the normal corneal topography, faster and stronger wound healing, and the avoidance of suture-related problems such as induced astigmatism, unpredictable corneal power, infection, ulceration, and suture-induced vascularisation leading to graft rejection.

CENTRAL AUSTRALIAN OCULAR HEALTH STUDY

John Landers, Tim Henderson, Sotoodeh Abhary, Jamie Craig

The Central Australian Ocular Health Study was designed to enumerate the levels of ocular morbidity among indigenous Australians living in remote communities within the central Australian statistical subdivision, one of the most isolated and disadvantaged regions of the country. This project was undertaken by the departments of Ophthalmology at Alice Springs Hospital and the Flinders Medical Centre during weekly outreach clinics conducted within remote central Australia.

1,884 individuals aged 20 years or older, living in one of 30 remote communities within the statistical local area of 'Central Australia' were recruited for this study. This equated to 36% of those aged ≥ 20 years and 67% of those aged ≥ 40 years within this district, allowing for the determination of ocular disease prevalence. Six-hundred-and-eight (32%) were subsequently reviewed between 6 months and 3 years of their initial assessment (median 2 years), thereby allowing estimations of ocular disease incidence. Participants were recruited as they presented to the eye clinic at each remote community. They underwent visual acuity testing and subjective refraction. Following this they had a comprehensive ocular assessment of their anterior and posterior segments including visual field testing on a selected group.

This presentation will summarise the main findings from this project including estimates of visual impairment, refractive error, cataract, diabetic retinopathy, trachoma and glaucoma and touch on areas of ocular and general health that may be expanded upon in future projects.

IMAGING TECHNIQUES IN THE 2RT TRIAL

Kate Brassington, Robyn Guymer

The aim of the 2RT trial at the Centre for Eye Research Australia is to slow the progression of age-related macular degeneration (AMD) by using a specially designed laser by Ellex. This laser is a nanosecond low-impulse laser designed to target the retinal pigment epithelial (RPE) cells in the hope of reducing progression of AMD. Since starting the 2RT trial our ability to perform a variety of new imaging techniques has enhanced our ability to monitor these patients. At the beginning of the trial, the stratus OCT and fundus photos were heavily relied on for monitoring patients progression. Since then we have gained access to cameras that enable us to perform autofluorescence and higher quality OCTs. The Heidelberg autofluorescence, the Zeiss Cirrus OCT and the Heidelberg Spectralis machines have made it possible to see evidence of the Ellex laser which were not visible previously. These machines not only enable us to see changes in the RPE but also allows us to observe changes in drusen morphology far more precisely than in a fundus photo and to monitor these changes over time.

CAN HMG CO-A REDUCTASE INHIBITORS (STATINS) DELAY AMD PROGRESSION? THE AGE-RELATED MACULOPATHY STATIN STUDY (ARMSS)

Mary Varsamidis, Luba Robman, Peter Dimitrov, Galina Makeyeva, Khin Aung, Paul Baird, Algis Vingrys, Robyn Guymer

Aim: To determine whether simvastatin can delay the progression of early age-related macular degeneration (AMD).

Method: ARMSS is a 3-year randomised controlled double-masked trial. One-hundred-and-fourteen participants aged 50 years or over with high risk of AMD progression were randomised to receive either a placebo or 40mg simvastatin per day for 3 years. They underwent visual and ophthalmic examination, venepuncture, fundus photography and visual function tests biannually. Digital macular images from baseline and the last follow-up visit were assessed side-by-side for AMD progression in a masked-to-the-date-of-visit mode.

Results: A total of 104 participants contributed to study follow-up, 10 withdrawing after randomisation. The mean age of participants was 74.4 (± 6.4) years in placebo and 74.8 (± 7.5) years in the simvastatin group. Gender ratio was equal between the groups. Smokers constituted 47% of the placebo group and 65% of those receiving simvastatin ($p=0.06$). Thirty-two percent of participants receiving placebo and 53% receiving simvastatin had late AMD in one eye at baseline ($p=0.03$). There was no significant difference for worsening of AMD status, adjusted for age, gender and smoking, between the groups for the total sample, OR=1.29 (95%CI, 0.52-3.17). However, for those who had no late AMD in either eye, worsening of AMD status on follow-up was strongly associated with the placebo group compared to the simvastatin group, OR=3.54 (95%CI, 1.02-12.28).

Conclusion: Preliminary analysis showed a considerable difference in early AMD progression between the active treatment and placebo groups.

VERTICAL INTERLINE SPACING AND WORD RECOGNITION USING PERIPHERAL RETINA

Alannah Price, Meri Vukicevic

Slow reading is a common complaint of people with central vision loss who need to use their peripheral vision. The crowding phenomenon in the peripheral retina has been proposed as a contributing factor to slower reading speeds. Papers published in the area of psychophysical aspects of reading have found that increased interletter spacing above the standard 1x does not result in a significant improvement in reading speeds when using peripheral retina. Therefore researchers have focused attention on vertical interline spacing and reading. At present the results from studies within this area are conflicting.

Participants with normal vision were recruited and required to identify sets of target words that were flanked above and below by 'x' to simulate vertical crowding. The target words were rendered in lowercase "courier new" font, with the interline spacing either 1x, 1.5x or 2x presented at both the fovea and 6 degrees eccentricity on the inferior retina. Stimuli were presented on the Tobii Eye Tracker which allowed for the monitoring of participants fixation. Speed of word identification was measured along with word accuracy. The results will be presented.

PLAQUENIL TOXICITY SCREENING: WHAT MORE CAN WE DO?

Mara Giribaldi

Plaquenil toxicity is very rare, however well documented along with its associated risk factors. Despite its rarity and thus its infrequent diagnosis in clinical practice via our current assessment regimes, how best can we screen for the early signs of plaquenil toxicity? What are our current screening tools and how can other tests be utilised such as ocular coherence tomography (OCT), photography including fundus autofluorescence (FAF) and multifocal electroretinography (mfERG).

The aim is to detect the very early signs of ocular and retinal changes in order to prevent irreversible plaquenil toxicity. This presentation will provide an overview of the effects of plaquenil and its toxicity, patient monitoring and follow-up protocols, current screening methodologies as well as highlighting screening pitfalls and limitations.

DANGEROUS DIPLOPIA: WHAT TO LOOK OUT FOR

Celia Chen

Diplopia may be due to congenital or acquired causes. It may be the presenting symptom of a life-threatening systemic disease such as myasthenia gravis or a cerebral aneurysm. In this presentation, Dr Chen will present a systematic approach to evaluating patients with diplopia and alerting to the danger signs that one should look out for.

OCULAR TRAUMATOLOGY: THE BASICS

Ferenc Kuhn

Eye injury remains one of the most important causes of preventable blindness throughout the world. Every person dealing with ocular diseases must understand the types of trauma; their importance and recognition; and must be able to discuss the implications with the patient as well as to perform the basic tasks of emergency intervention. The patient must then be referred to an institution where all elements of the optimal treatment are available: an ocular traumatologist dedicated to the cause and properly trained in the most up-to-date techniques and a facility that offers 24/7 service including a properly equipped facility and a knowledgeable, dedicated staff. This lecture will review the details of these fundamentals.

OCULAR MORBIDITIES IN PRETERM CHILDREN

Deepa Taranath

Advances in neonatal care have increased the survival rates of preterm infants. Retinopathy of prematurity (ROP) and other ocular morbidities such as strabismus, refractive errors, amblyopia, cortical visual impairment can occur in these children in isolation or in the background of developmental delay. Assessment of preterm children can be challenging to orthoptists and ophthalmologists alike particularly in the face of overburdened clinics.

A PATIENT'S PERSPECTIVE OF GLAUCOMA MANAGEMENT

Ivan Goldberg

All chronic, incurable diseases present particular challenges for health care workers, as treatment necessarily is life-long. Glaucoma is such a condition: if untreated or inadequately treated, it is progressive, and the visual damage it causes is not recoverable.

Successful management, from diagnosis through ongoing assessment and employment of various strategies of treatment requires a team approach for involved eye care workers and the building of a therapeutic alliance between them and the patient, and if possible his/her family or carers. Eye care team participants need to be aware of quality of life issues for the patient. These include effects from the disease as it threatens visual disability as well as the deleterious effects of treatment strategies.

Major challenges include: (i) understand how the disease and its treatment are affecting the quality of life for an individual patient, (ii) patient adherence to and perseverance with medical therapy; ensure s/he understands the importance and realistic goals of treatment, (iii) build an alliance between the therapeutic team and the patient against the disease and (iv) effective communication; have a store of lay-friendly stories to tell.

THE EFFECT OF LATANOPROST ON CENTRAL CORNEAL THICKNESS IN PSEUDO-EXFOLIATION GLAUCOMA

Tracey Lee, Linda Malesic

Aim: Studies have found a change in central corneal thickness (CCT) in primary open angle glaucoma and ocular hypertension populations following the use of prostaglandin analogs. Current literature supports the notion that latanoprost use is associated with a decrease in CCT. The effect of latanoprost on CCT in pseudo-exfoliation (PXF) glaucoma has not been investigated.

Objective: To investigate the influence of a latanoprost on CCT in patients with newly diagnosed PXF glaucoma.

Methods: Patients with newly diagnosed PXF glaucoma who were prescribed the use of latanoprost were sought from The Royal Victorian Eye and Ear Hospital. A total of five patients (10 eyes) with a mean age of 67.2 years (SD 19.08), who met the inclusion criteria were included in this study. CCT was measured at baseline and repeated 8 weeks post latanoprost use.

Results and Conclusion: Topical latanoprost use over an 8-week period (+/- 1 week) was associated with a statistically significant mean decrease of 1.07% ($p = 0.036$) in CCT. Our finding in this cohort of PXF glaucoma patients of a decrease in CCT over an 8-week period signifies the need for conducting long-term follow-up of the effects of prostaglandin analogs on CCT. It raises the issue of whether prostaglandins should be prescribed to this group of secondary glaucomas if corneal integrity is compromised long-term. Since true interpretation of intra-ocular pressure readings are influenced by a patient's CCT measurement our findings also strongly support the need for repeating CCT measurements in an ophthalmic setting when reviewing patients with PXF glaucoma and utilising topical latanoprost.

AMBLYOPIA: WHAT'S NEW?

Liane Wilcox

The treatment of amblyopia is constantly evolving as PEDIG studies reveal results of randomised controlled trials performed over the last 10 years. The PEDIG studies have also encourage many other study groups to expand our knowledge of what types of amblyopia treatment are best suited to the type of amblyopia that presents in our clinics.

This presentation will seek to summarise the latest research from around the globe and encourage the audience to translate research data into clinical protocols.

HOW DO CHILDREN PERCEIVE THEIR PEERS WITH AMBLYOPIA TREATMENT?

Rebecca Moorhead, Connie Koklanis, Zoran Georgievski, Gwyneth Rees

Previous literature has shown that children undergoing amblyopia treatment feel stigmatised and embarrassed of their treatment and worry that their peer relationships may be threatened. Although this research suggests the presence of negative perceptions towards children undergoing amblyopia treatment, to date no research has looked into this. Using questionnaires, we investigated perceptions of 8-9 year old children towards peers undergoing amblyopia treatment and compared the responses towards patching and atropine. The findings of this study will be presented.

OCCLUSION THERAPY

Nicole Mocnay, Susan Carden

Purpose: The aim of this study was to determine the effectiveness of occlusion therapy in children with amblyopia.

Methods: Patients undergoing occlusion therapy who attended orthoptic

clinics in February, March and April 2009 were retrospectively reviewed.

Results: Forty patients were found to meet the inclusion criteria. Follow-up from beginning of occlusion ranged from 11 months to 7 years. Initial vision in the amblyopic eye ranged from 2/24 to 3/4.8. Improved vision ranged from 3/9.6 to 6/4pt. Occlusion therapy was found to improve visual acuity in all patients. Seventy-five percent had an improvement to equal vision or one line difference between the eyes. Eighty-four percent of patients had their improved vision remain stable.

Conclusion: Based on the results of this study, occlusion therapy is successful in treating amblyopia in children.

VISUAL DISTURBANCES IN PATIENTS WITH CHRONIC FATIGUE: A CASE STUDY

Thuy Chau, Connie Koklanis, Zoran Georgievski

A three-year-old boy presented to the eye clinic at the Royal Children's Hospital after a bicycle injury involving possible blunt trauma to the right eye. At this time he was diagnosed with a right micro-esotropia, hypermetropia and a mild degree of amblyopia. He was prescribed glasses and underwent ongoing treatment of occlusion until approximately nine years of age. During amblyopia treatment, visual acuity fluctuated, however once the vision was stable he was discharged to a local optometrist. At the age of 14, five years after his discharge, the child returned to the eye clinic complaining of diplopia and visual disturbances, including flickering and distortion of images, and silvery/black spots in his vision. He had also been diagnosed with chronic fatigue syndrome. This paper will present the clinical findings of this case and discuss ocular manifestations in patients with chronic fatigue syndrome.

THE SYNOPTOPHORE IN THE MODERN OPHTHALMIC PRACTICE

Kamil Gorski

Commonly known, uncommonly used, the synoptophore is an outstanding piece of equipment with excellent potential in any comprehensive ophthalmic clinic. The advantages and disadvantages of the synoptophore will be discussed with recent cases.

STRABISMUS SCREENING AT THE CHILDREN'S HOSPITAL AT WESTMEAD

Lindley Leonard

In 2009 an orthoptic-led Strabismus Screening Clinic was developed at The Children's Hospital at Westmead. This clinic was initiated to determine if there could be a reduction in waiting time from referral to an appointment in the CHW eye clinic for children with identified strabismus. An added advantage was to prevent unnecessary eye clinic appointments for children found to have pseudostrabismus. This presentation examines the role that the Strabismus Clinic has within the eye clinic at The Children's Hospital at Westmead and the benefits to patient outcomes as a result.

ESTABLISHING AN ONLINE COMMUNITY FOR ORTHOPTISTS: THE NSW PAEDIATRIC ORTHOPTIC INTEREST GROUP

Sue Silveira

The profession of orthoptics is a well recognised and highly specialised eye health profession. Groups of "orthoptic experts" have developed in all areas of practice including paediatrics. With this specialisation comes the

need for experts to have contact, to mentor one another and to ensure their craft is preserved for future generations of orthoptists.

During 2010 a Paediatric Orthoptic Interest Group was established in NSW for the purpose of professional supervision, development of collaborative research and sharing of resources. An online forum was developed, with a resources area for sharing of ideas, existing protocols and research. The experiences of the orthoptists involved in the Paediatric Orthoptic Interest Group will be shared in this presentation.

OVERVIEW OF CONGENITAL CATARACTS AT THE CHILDREN'S HOSPITAL AT WESTMEAD

Stephanie Crofts, Katie Scanlon

Congenital cataract affects children and their vision from an early age. Early diagnosis and treatment is vital. Following surgical lensectomy, children with congenital cataract will either have an IOL inserted or be fitted with an aphakic contact lens. One possible complication of surgery in these children is pupil block glaucoma. A retrospective review of patients with congenital cataract who presented to the eye clinic at The Children's Hospital at Westmead will be discussed.

IMPORTANCE OF VIRGINITY

Laura Hartley

Importance of Virginity highlights the importance of accurate biometry in IOL calculations for cataract surgery. The importance of a virgin cornea is discussed as over 100 eyes are analysed, highlighting the common errors occurring in IOL calculations. The most common being a tainted cornea. Analysis is conducted by measuring applanation tonometry followed by biometry calculations comparing against results with no applanation

tonometry. The results are discussed in great detail and are supported by statistically significant evidence.

CATARACT SURGERY OUTCOMES: A FIVE-YEAR REVIEW

Linda Santamaria

Purpose: To present the results of five years of audits of postoperative clinical outcomes, evaluating the Southern Health Model of Cataract Care.

Methods: A random sample of patients has been selected for each of the last five years, resulting in a total of 1,611 patients. These patients were followed to determine their final clinical and functional outcomes.

Results: In 2009 the mean final best corrected visual acuity was 0.86 decimal (6/7), significantly increased from 0.38 decimal (6/16) preoperatively, with 94% achieving 0.50 decimal (6/12) or better. The mean spherical equivalent outcome refraction was -0.24 DS. The mean absolute refractive prediction error was 0.40 DS, with 72% achieving a refractive prediction error within 0.50 DS and 93% within 1.00 DS. Visual function was measured by the VF-14 questionnaire and the postoperative mean was 87.51, significantly increased from 72.57 preoperatively.

Conclusions: It is important to evaluate clinical outcomes to ensure that they are within international benchmarks. Cataract extraction with intraocular lens implantation is the most frequently performed ophthalmic surgical procedure in Australia and as the population ages there will be an ever increasing need. Therefore a resource-efficient provision of service will become increasingly important. Continual audit and evaluation leads to changes in clinical and administrative practices in order to provide the highest quality of care.