

O r B i t s

What a Sight!



AONA Victoria's "Sight Seeing, Victoria" conference was a resounding success with over 95 delegates attending on a cold, blustery, joyously wet Melbourne saturday. We were pleased to welcome Ophthalmic nurses from around Victoria, Tasmania, Adelaide, Sydney, Perth and New Zealand who came to learn and

network with like minded ophthalmic nurses. Our speakers informed us of the latest developments from a wide variety of ophthalmic perspectives. Professor Robyn Guymmer updated us on AMD research and medical treatments, followed by Julie D'Arcy RN and Dr Nathan Clunas presenting nursing and pharmaceutical aspects of care respectively. Janice Stielow, Infection Control Nurse, provided some fascinating data on infection prevention strategies and the worst case scenario - endophthalmitis, drawing some interesting comments from the floor. Session two showcased ophthalmic care from a nurse practitioner and community perspective illustrating how ophthalmic nurses can improve access to ophthalmic care for patients. Session three began with Professor Jill Keeffe discussing how best to assess and understand our patients needs, Dr Ben Connell followed with footage of the latest corneal graft surgical techniques. To end the day, emergency speaker, Gerard Walsh RN presented the delegates with a review of corneal emergencies, updating their understanding of these devastating diseases.

The day finished with a delicious thirst quenching happy hour sponsored by Alcon. Over 30 prizes from industry sponsors and AONA Vic were won....the ipod shuffled across the Tasman to New Zealand. We would like to express our thanks to the all of our sponsors for their support, and particularly



to the delegates and hope that our program was beneficial. We plan to present the speakers notes on our website during coming year.
www.aonavic.com.au

**Merry Christmas and
a safe,
happy New Year
to you all**

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Presidents Report

Hi All ,

Happy Christmas and New Year to all.

Well we had a very enthusiastic and large delegate attendance at our Biennial conference held in Melbourne in conjunction with RANZCO. It was attended by Ophthalmic nurses from across Victoria as well as South Australia, Western Australia, N.S.W. and Queensland in addition to those from across the Tasman. So lots of sharing of Ophthalmic stories. 60% of surveys return said they favoured the connection with RANZCO, 20% didn't matter and 20% had no opinion.

All went well and by all accounts delegates enjoyed it. We will present a formal evaluation in early 2009 but for now some comments were "fantastic" "high quality speakers", "great to hear nurses talk", and "excellent food" "happy

hour very enjoyable and great networking." "venue had easy access for kiwi's." There were plenty of suggestions for future topics so we will incorporate into our clinical meetings next year and will put out in early 2009 call for presentations..... So all of you members thinking of presenting what you are doing. Nurses **do** want to hear from nurses.....as well as medical and other ophthalmic professionals. con't p4

Lens Calcium and Cataract

Borchman et al., Louisville, USA
Ophthalmic Res 2008;40:86-93
In virtually all cells, calcium regulates many physiological and cellular events by acting as a second messenger; calcium also triggers pathological events in cell injury and death. The lens is no exception, and every cataractous lens contains 3-1,000 times more calcium than clear lenses. It has been hypothesized that the de-arrangement of calcium balance is a significant factor in the cataractogenic cascade. Calcium homeostasis is accomplished by a delicate bal-

ance between cell membrane permeability and the active transport of calcium by Ca-ATPases at the level of the cell membrane (PMCA) and the endoplasmic reticulum. In this study, the authors found that the lack of expression of PMCA cannot account for the elevated levels of calcium with increasing age and cataract. Other factors such as an increase in membrane permeability or the direct inhibition of PMCA or its activators must account for the high amount of total calcium in cataractous lenses.

Effects of Acetylcysteine and Dexamethasone on Experimental Corneal Wounds in Rabbits

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Abstract Corneal wound healing often leads to the development of scar tissue with loss of transparency. Reconstitution of transparent corneal stroma depends on the regulation of the biosynthetic activities of postlesional keratocytes as well as to a large extent on the limitation of matrix degradation. It has been shown that 3% concentration of N-acetylcysteine (NAC) improves the healing time of corneal wounds but some corneal haze remains. On the other hand, topical corticosteroids may retard the corneal wound healing but decrease the haze. Thus, the aim of the study was to evaluate whether adding dexamethasone to NAC could reduce the side effects of the two drugs. In this study, experimental corneal wounds were created surgically, up to the depth of one half of the stroma in the center of both eyes of all rabbits. The left eyes were treated topically with 0.9% NaCl as controls and

the right eyes were treated with a combination of one drop of 3% NAC and one drop of 0.1% dexamethasone, 6 times per day. Corneal wounds were measured by fluorescein staining every day. The results indicated that the combination of acetylcysteine and dexamethasone significantly increased the mean healing time compared to the control group ($p < 0.05$). Clinical and histopathologic examinations revealed that the corneal haze in the treatment group was greater than in the control group. It is concluded that treatment of the eyes by a combination of 3% acetylcysteine and 0.1% dexamethasone (if used from the first day of ulceration) may retard the corneal wound healing in rabbits.

<http://content.karger.com/ProdukteDB/produkte.asp?Aktion=ShowAbstract&ArtikelNr=111158&Ausgabe=234169&ProduktNr=223858>

Anti-oxidative Actions by NSAIDs/ASA in the Lens

Petersen et al., Göteborg, Sweden
Ophthalmic Res 2008;40:77-85

This study examined the mechanisms behind the anti-cataractogenic effects of the non-steroidal anti-inflammatory substances indomethacin, diclofenac, celecoxib and acetylsalicylic acid (NSAIDs/ASA). The authors found a reduction of superoxide and per-

oxide production as well as a reduction of glutathione depletion in oxidatively stressed human lens epithelial cells incubated with low concentrations of NSAIDs/ASA. These results indicate antioxidative properties of NSAIDs/ASA, which is separate from their ability to reduce inflammation, pain and fever by inhibition

of the enzyme cyclo-oxygenase. This study provides an explanation for previous reports on anti-cataractogenic effects of these substances. The understanding of reactive-oxygen-species-scavenging actions by NSAIDs/ASA may lead to further therapeutic/prophylactic applications in the future.

Effect of Different Biomedical Membranes on Alkali-Burned Cornea

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(DOI: 10.1159/000131503)

Objective: To evaluate the effects of different biomedical membranes on alkali-burned cornea in vivo. **Methods:** 12 New Zealand rabbits were chosen and randomly divided into four groups. The right cornea of each rabbit was made into an alkali-burned model with 1 mmol/l NaOH. Poly-*D,L*-lactic acid (PDLLA), PDLLA modified with collagen (PDLLA/collagen) and PDLLA modified with chitosan (PDLLA/chitosan) membranes were transplanted onto the alkali-burned corneas for evaluation. Clinical evaluations were performed daily with a slit lamp. On the 12th day after surgery, the progress in wound healing was compared by clinical and histological examination. The re-epithelialization of each cornea was evaluated with fluorescein staining and 3 corneas of each group were excised to observe histological changes such as corneal wound healing, inflammation and collagen synthesis. **Results:** The wound healing rate of the PDLLA/chitosan group was higher than in the other groups. A more orderly arrangement of collagen and mild inflammation was observed. The control group had the next best performance, while the PDLLA/collagen and PDLLA alone treatment groups showed the worst results. **Conclusion:** PDLLA/chitosan promoted wound healing of alkali-burned corneas in vivo and decreased scar tissue formation, while the effect of the PDLLA/collagen and PDLLA membranes was to promote corneal ulcers, which suggests that PDLLA/chitosan membrane transplantation is a potential effective strategy for treatment of alkali-burned cornea.

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Convergence Insufficiency: ADHD

difficulty or inability of the eyes to converge and work together at a near distance, such as when reading, writing, or drawing; can result in headaches, diplopia, dizziness, and nausea. Headaches; sleepiness; loss of concentration; nausea; dull ocular discomfort, and general fatigue. Symptoms worsen as the amount of near visual demand increases. Typically, one eye will turn outward (intermittent *exotropia*) when focusing on a word or object from closer than a certain distance. People with CI often have 20/20 distance vision. It can be treated with vision therapy (eye exercises and/or a computer program developed to enhance convergence ability) or by using prismatic power in lenses.

A relationship between convergence insufficiency and ADHD...an apparent three-fold greater incidence of ADHD among patients with CI when compared with the incidence of ADHD in the general US population (1.8-3.3%). We also note a seeming three-fold greater incidence of CI in the ADHD...may simply represent an association and not be a causative relationship.

Early visual assessment of all children is important to enable early detection and treatment as required.
<http://webeye.ophth.uiowa.edu/eyeforum/tutorial/s/Bhola-BinocularVision.htm>
<http://www.journalofvision.org/8/14/i/>
<http://web.njit.edu/~alvarez/conference/The%20Dynamics%20of%20Convergence%20Insufficiency.pdf>

Suppression

is a neuro-physiological active inhibitory mechanism in which when corresponding retinal areas are stimulated by dissimilar stimuli or when non-corresponding retinal areas are stimulated by similar stimuli, one or the other is temporarily inhibited or suppressed to prevent confusion or diplopia respectively. Suppression is foveal in order to tackle confusion and extra-foveal in order to avoid diplopia.

Suppression can be further of two types:

- Facilitative- Facilitative suppression is only under binocular conditions with no persisting "hang over" under monocular conditions. Thus the visual acuity is not reduced under monocular conditions and there are no unocular scotomas in the visual field.
- Obligatory- Obligatory suppression is the effect which carries on even under monocular conditions resulting in diminution of visual acuity. Amblyopia is the fallout of this obligatory suppression.

Conference Photos



Professor Robyn Guymer



Raffle tickets - good luck....



Lively Viv

Need an excuse to visit Europe? The International Ophthalmic Nurses Conference (IONA) will be holding its annual conference on the 5th and 6th of June 2009. Present a paper or attend, see the website for further information

www.iona-online.org.au
Westwood Hall Leeds

Presidents Report

We also held our AGM at the conference and it was agreed that we become incorporated, so the committee is working on all the processes. The next step is to appoint an auditor, we have meetings lined up in January.

We plan to have our 2009 AGM run concurrently with a clinical meeting in July. This provides a great opportunity for members to have their say.

Clinical meeting dates will be posted on our website in late January.

We are also looking at forging links with RCNA to enable nurses to have their time spent at clinical meetings as well as conferences credited towards their professional development as we are well aware of the busy lives of our members and want to maximise the use of their education time.

For those with the travel bug, the date for the International Ophthalmic Nurses Association Conference is the 5th & 6th of June, in Leeds, U.K. They have allocated tentative space on their program for AONA Vic members to present, so what about a tax deductible holiday? See details in events calendar.

Best wishes to all and thanks for your great support as always and a BIG thank you to all the committee on your behalf. They are so professional and dedicated to promoting Ophthalmic Nursing it is a pleasure to work with them.

President Pam Armstrong

Orbis FEH

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The **ORBIS Flying Eye Hospital (FEH)** is a unique mobile teaching and operating facility on board a DC-10 jet aircraft that travels to developing countries worldwide to share the gift of sight. Our Flying Eye Hospital staff travel up to 45 weeks per year and anywhere from a few weeks to 3 months at a time. For more information about ORBIS and this employment opportunity, please visit our website: "www.orbis.org To apply, email your cover letter to HR@orbis.org