

P1-0006**THE EYELID CLEANSERS EYECLO8 AND EYECL12 ARE BACTERICIDAL FOR 40 ENDOPHTHALMITIS ORGANISMS****Jeffrey P. Gilbard, Barbara Paton**

Endophthalmitis is a devastating complication of eye surgery. The lids and lashes are frequently the source of the offending organisms. We collected 40 organisms isolated from patients with endophthalmitis who presented to the Massachusetts Eye and Ear Infirmary, Boston, over the past 2 years: 19 strains of *Staphylococcus epidermidis*, 8 of *S. aureus*, 4 of *Pseudomonas aeruginosa*, 3 of methicillin-resistant *S. aureus*, 3 of *S. warneri* and 3 of *Serratia marcescens*. Inoculums were prepared from overnight cultures grown on noninhibitory media. Four or five well-isolated colonies of each isolate were emulsified in 5 mL of sterile distilled water. The solutions were adjusted to approximate a 0.5 McFarland turbidity standard, and then 10- μ L aliquots were inoculated into tubes containing 1 mL of EYECLO8, EYECL12 or, as control, tryptic soy broth. After overnight incubation in a non-carbon-dioxide incubator, all control tubes showed growth, whereas tubes containing EYECLO8 or EYECL12 showed no growth. Thus, EYECLO8 and EYECL12, eyelid cleansers designed for convenient and comfortable patient use in the days preceding eye surgery, are bactericidal and may help reduce the incidence of endophthalmitis.

This paper has received funding from Advanced Vision Research.

P2-0013**LENS OPACITY AFTER PHOTOCHEMOTHERAPY****Zahra Hallaji, Ali Abdollahi, Zahra Kefayati****Purpose**

Therapy with psoralene + ultraviolet light (PUVA) can cause cataract and, rarely, retinal damage. We evaluated the ocular complications of oral PUVA therapy.

Methods

The study was conducted with 50 patients who received at least 50 sessions of PUVA therapy. All patients underwent visual acuity testing, slit-lamp biomicroscopy and indirect ophthalmoscopy before and after treatment.

Results

There were 2 instances of cortical cataract formation, the first in a 37-year-old woman who received 107 sessions and the second in a 57-year-old woman who received 100 sessions. Both patients had avoided wearing sunglasses. The total dose of radiation was 847 J/cm²

in the first patient and 608 J/cm² in the second. In another 13 patients punctate and linear lens opacities of no clinical significance were noted.

Conclusions

It seems prudent to examine the lens and the fundus during follow-up of patients receiving long-term PUVA therapy.

P3-0017

WHY ARE PATIENTS WITH NO COMPLAINTS ON CATARACT WAITING LISTS?

Lorne Bellan

Purpose

Some patients waiting for cataract surgery report no visual symptoms in response to standardized visual function questions, which raises concerns about their need for surgery.

Methods

Consecutive patients who reported no symptoms in response to the 14-item Visual Function questionnaire (VF-14) (scoring 100) were asked whether they had any other symptoms, why they were on the waiting list and what they expected to gain from surgery. After surgery they were asked whether they were satisfied with the procedure and whether their vision had improved.

Results

Of the 149 patients, 108 (72%) described some visual impairment, 28 (19%) stated they were following their doctor's suggestion, and 13 (9%) did not describe any reason for their surgery. After surgery 89 (85%) of the 105 patients who responded said that they were very or extremely satisfied, and 75 (71%) stated that they felt that their vision was markedly improved.

Conclusions

Patients on cataract waiting lists scoring 100 on the VF-14 are likely to have some symptoms not identified by the questionnaire and are likely to experience significant visual gain from cataract surgery.

P4-0086**PREOPERATIVE FASTING BEFORE CATARACT SURGERY: HOW DO OPHTHALMOLOGISTS AT THE MCGILL UNIVERSITY HEALTH CENTRE FEEL ABOUT THIS PRACTICE?****Daniela Toffoli, Ivana Zuliani, Rosanne Superstein, Ted Connolly****Purpose**

The use of phacoemulsification and local anesthesia has called into question the need for preoperative guidelines for cataract surgery. Our goal was to evaluate how ophthalmologists at the McGill University Health Centre (MUHC), Montreal, view fasting before cataract surgery.

Methods

Survey mailed to 49 MUHC ophthalmologists in February 2004.

Results

Twenty-six ophthalmologists (53%) returned completed surveys. Of the 26, 15 (58%) mostly use topical anesthesia. Three (20%) of the 15 require fasting after midnight, 6 (40%) require fasting after breakfast, and 6 (40%) require no fasting. Of the 10 respondents who mostly use injection anesthesia, 6 (60%) ask patients to fast after breakfast, and 4 (40%) require no fasting. Overall, 12 respondents (46%) indicated that guidelines regarding fasting before cataract surgery are needed.

Conclusions

We found wide variability in fasting practices before cataract surgery at the MUHC. Although a large proportion of ophthalmologists surveyed felt a need for guidelines, more than 1 in 3 felt they are unnecessary.

P5-0096**PATTERNS OF PERIOPERATIVE PROPHYLAXIS FOR CATARACT SURGERY IN CANADA****Dena Hammoudi, Ishtiaq Ahmed, David Wong****Purpose**

To evaluate patterns of perioperative prophylaxis for cataract surgery in Canada.

Methods

An anonymous electronic survey was emailed to 300 ophthalmologists practising in Canada.

Results

Of the 124 respondents, 97.6% preferred phacoemulsification as the surgical method. Preoperative topical antibiotic prophylaxis was routinely used by 81%. Intraoperatively, 19% performed saline irrigation, and

98% used a povidone–iodine antiseptic skin preparation. Intracameral antibiotics were used by 18% and subconjunctival antibiotics by 12%, with greater use by surgeons performing fewer than 300 cases per year ($p < 0.001$). Postoperatively, topical antibiotic therapy was used by 97% and systemic antibiotic therapy by 2%. The prophylactic regimen was changed after vitreous loss by 41%.

Conclusions

Prophylactic methods commonly used for cataract surgery in Canada include povidone–iodine preparation, and pre- and postoperative topical antibiotic therapy. Intracameral and subconjunctival antibiotics are currently not consensus prophylactic methods, and use varies by case volume.

This paper has received funding from Alcon Canada Inc., Allergan Inc.

P6-0097

ARE HYDROPHILIC ACRYLIC INTRAOCULAR LENSES SAFE IN NORTH AMERICA?

Michel Giunta, Eric Mazerole

Purpose

To summarize the key characteristics and evaluate the safety and efficacy of the foldable hydrophilic acrylic Akreos Adapt intraocular lens (IOL) from Bausch & Lomb.

Methods

Prospective study of 20 eyes that received an Akreos Adapt IOL with a 6.0-mm optic at the Centre Hospitalier Universitaire de Sherbrooke, Sherbrooke, Que. Patients were examined 1 to 4 months postoperatively.

Results

The Akreos Adapt IOL demonstrated excellent positional stability. No discolouration, microvacuoles, glistening or calcifications were observed.

Conclusions

Follow-up of 4 months is insufficient to conclude that a hydrophilic IOL has no calcification problems similar to those previously reported. The Akreos Adapt IOL has a different copolymer composition from that of Hydroview lenses. In short-term clinical use, the Akreos Adapt IOL demonstrated good biocompatibility, optical clarity and stability in the capsular bag.

P7-0113**AKREOS ADAPT INTRAOCULAR LENS IMPLANTATION:
RESULTS IN A LARGE SERIES****Giorgio Lofoco****Purpose**

To evaluate the intraoperative and postoperative performance of the single-piece acrylic hydrophilic Akreos Adapt intraocular lens (IOL) in a large series of patients.

Methods

Retrospective review of the cases of 891 patients who underwent phacoemulsification and implantation of the single-piece Akreos Adapt IOL between September 2001 and May 2004, evaluating control of folding, ease of implantation, lens centration, intraoperative and postoperative complications, and visual acuity. Anterior and posterior capsule opacification was evaluated by means of the Evaluation of Posterior Capsular Opacification system in a subgroup of 390 cases.

Results

In all cases the Akreos Adapt IOL was folded, inserted and unfolded easily and showed good centration in the capsular bag. No intraoperative or postoperative complications related to the lens were identified. Anterior and posterior capsule opacification results will be discussed.

Conclusions

The single-piece Akreos Adapt IOL shows good biocompatibility, stability and fixation in the capsular bag as well as a low posterior capsule opacification score owing to its sharp edge.

This paper has received funding from Bausch and Lomb.

P8-0114**A DUAL-OPTIC/SINGLE-AXIS, VARIABLE-MEDIA BIFOCAL
INTRAOCULAR LENS IMPLANT****Yogesh Gupta, Meenakshi Gupta****Purpose**

To describe a new concept in bifocal intraocular lens (IOL) technology.

Methods

This IOL consists of a coaxial plano-convex lens combination. The anterior half-dumbbell-shaped lens, with its convex surface placed anteriorly, has a power of 20.00 dioptres within the eye or as required for distance vision. Posterior to it is a second lens with a power of about 3.00 D in air, also with its convex surface directed anteriorly. The small space in between the two lenses is sealed around the periphery and filled to

about two-thirds with an appropriate liquid; the top third is occupied with air. The IOL is designed such that when the eyes are directed horizontally for distance vision, the liquid occupies the space in between the optical zones of the lenses. This almost neutralizes the power of the convex surface of the posterior lens, whereas the power of the plane surface of the anterior lens is unaffected. The resultant power for distance is thus about 20.00 D. When the eyes swivel downward by 30° to 40° for near vision, the fluid level remains horizontal, resulting in air occupying the space in between the optical zones of the lenses and leading to restoration of the power of the posterior lens to 3.00 D. Thus, the total power of the lens combination for near is 23.00 D. The lens was designed and evaluated in model and enucleated animal eyes.

Results

The IOL successfully provided power changes for vision at distance and near.

Conclusions

This lens holds tremendous promise and may prove to be a breakthrough in bifocal IOL technology.

P9-0118

SURGICAL REPOSITIONING OF DISLOCATED CAPSULAR TENSION RINGS

Iqbal Ahmed, Sylvia Chen, Christoph Kranemann, David Wong

Purpose

To present techniques and results of surgical repositioning of subluxed and dislocated capsular tension rings (CTRs).

Methods

Data for 11 patients with decentration of a previously implanted CTR "in the bag" for zonular weakness who underwent surgical repositioning were retrospectively evaluated for underlying diagnosis, interval between initial surgery and decentration, surgical technique, clinical results and complications.

Results

The mean duration from initial surgery to surgical repositioning was 49.6 months (standard deviation [SD] 15.3 months). Seven eyes had pseudoexfoliation. The surgical approach was scleral suture fixation of the CTR. Successful anatomic repositioning of the CTR – intraocular lens – capsular bag complex was achieved in all cases. The mean best corrected visual acuity improved from 20/100 preoperatively to 20/40 postoperatively; best corrected visual acuity improved in 7 patients, was maintained in 2, and worsened in 2 (owing to advanced glaucoma).

Conclusions

Postoperative CTR decentration is a risk for patients with severe or progressive zonulopathy that may be effectively managed with surgical repositioning.

P10-0119

CAPSULAR TENSION SEGMENT FOR POSTOPERATIVE INTRAOCULAR LENS DISLOCATION

Iqbal Ahmed, Christoph Kranemann, Alan Crandall

Purpose

To evaluate the effectiveness of the capsular tension segment (CTS).

Methods

The CTS was implanted in a prospective consecutive series of 26 patients with significant zonular dialysis. Visual outcomes and complications were analysed.

Results

The CTS was successfully implanted and sutured into position in all patients. Preoperative diagnoses included injury (10 patients), Marfan's syndrome (8 patients) and pseudoexfoliation (4 patients). Two CTS devices were used in 11 patients, and 1 CTS device was used in 15 patients. Visual acuity improved or stabilized in all patients. Five patients had elevated intraocular pressure in the early postoperative period, 3 of whom have required addition of long-term medical therapy. At mean follow-up of 15 months, there were no cases of intraocular lens decentration.

Conclusions

The CTS is a versatile zonular support device that can be safely and effectively implanted to reposition the capsular bag in cases of zonular dialysis.

P11-0121

SMALL-INCISION IRIS FIXATION OF FOLDABLE INTRAOCULAR LENSES IN ABSENCE OF CAPSULE SUPPORT

Iqbal Ahmed, Garry Condon, Sam Masket, Christoph Kranemann, Alan Crandall, Iqbal Ike Ahmed

Purpose

To report visual outcomes and complications of modified McCannel iris suture fixation of small-incision foldable acrylic intraocular lenses (IOLs).

Methods

Data for 46 consecutive patients who underwent iris fixation of a foldable acrylic IOL using peripheral iris suture fixation for aphakia in the absence of capsular support were retrospectively evaluated for underlying diagnoses, surgical history, clinical results and complications.

Results

Best corrected visual acuity improved from 20/100 to 20/50 ($p = 0.01$), with 97% of eyes maintaining or improving best corrected visual acuity after a mean follow-up of 18.6 months (standard deviation [SD] 11.5 months). Complications included transient low-grade uveitis (3 eyes [6.5%]), transient pigment dispersion without glaucoma (3 eyes [6.5%]), IOL dislocation (2 eyes [4.3%]) and retinal detachment (1 eye [2.2%]). No new cases of cystoid macular edema were observed, and no worsening of glaucoma occurred.

Conclusions

Small-incision peripheral iris fixation of a 3-piece acrylic foldable IOL in the absence of capsule support appears to be safe and effective.

P12-0021

ORBITAL CELLULITIS AND RHINOMUCORMYCOSIS IN AN IMMUNOCOMPROMISED CHILD WITH THALASSEMIA MAJOR

Sana Al-Zuhaibi, John Little, Sam Daniel

We report the resolution of orbital cellulitis associated with rhinomucormycosis in an immunocompromised 10-year-old boy with transfusion-dependent thalassemia major and autoimmune hemolytic anemia. The child presented with left orbital cellulitis and sinusitis. Magnetic resonance imaging showed marked mucosal thickness of the left paranasal sinus and a left inferomedial orbital density. There was no improvement with broad-spectrum intravenous antibiotic therapy. Débridement of the left nasal sinuses revealed necrotic tissue containing fungal structures consistent with mucormycosis. Amphotericin B administration and repeated sinus surgery were carried out for 6 weeks. Resolution of the orbital cellulitis was observed 1 day after the initial sinus débridement. We believe that the cellulitis in this patient represented an inflammatory response, without active orbital mucormycosis; thus, orbital surgery was not necessary. Medical treatment, sinus surgery and careful observation may suffice in a patient with orbital cellulitis and rhinomucormycosis.

P13-0090**EFFECT OF OCCLUSION METHOD ON VISUAL FUNCTION TESTING IN NORMAL AND AMBLYOPIC SUBJECTS****Heather Gunn, François Tremblay, Joan Parkinson****Purpose**

To determine whether the level of luminance allowed by various patching methods of the dominant eye affects visual performance of the tested, nondominant eye.

Methods

Contrast sensitivity and visual acuity of normal and amblyopic patients were measured on a computerized system using translucent and total-light occlusion devices. Stimulus presentation was randomized, and thresholds were determined through the staircase method.

Results

In the normal subjects, there was no observable difference in acuity measures based on type of occlusion, whereas differences were apparent in the results of contrast sensitivity testing.

Conclusions

Occlusion method may have an effect on visual performance. Preliminary results suggest that this effect may be more pronounced in amblyopes.

P14-0092**INCIDENCE OF RETINOPATHY OF PREMATURE IN A NEONATAL INTENSIVE CARE UNIT IN NOVA SCOTIA, 1998-2004****Louis-Étienne Marcoux, Gaetane Leblanc-Cormier, Michael Vincer, Kathi Benard, Johane Robitaille****Purpose**

To report the incidence of retinopathy of prematurity (ROP) and evaluate the variation in incidence from 1998 to 2004.

Methods

Retrospective analysis of the cases of all infants screened for ROP in the last 7 years at the IWK Health Centre, Halifax. Canadian Association of Pediatric Ophthalmologists screening guidelines were used. Infants who died or were transferred before reaching maximal ROP were excluded.

Results

In 2001-03 the incidence of any ROP in infants weighing less than 1500 g was 36%. The incidence rates of stage 3 and threshold ROP in the same group were 18% and 3% respectively. Results for the other years will follow.

Conclusions

Preliminary results show a lower incidence of any ROP than that observed in the Cryotherapy for Retinopathy of Prematurity Study, published in 1991. Our results are also in keeping with studies showing an increasing trend toward more stage 3 ROP in recent years.

P15-0128

CONGENITAL DACRYOCELE DIAGNOSED PRENATALLY

Christopher Lyons, John Valenzuela, Paul Mackenzie, Peter Dolman

A fetus of 34 weeks' gestation was found to have a large cystic medial canthal mass on routine prenatal ultrasound examination. A dacryoceles was diagnosed on the basis of the anatomic site of the lesion, and conservative management was advised. The diagnosis was confirmed at birth, and the cystic lesion was decompressed via the nose; probing and syringing was also performed to confirm patency of the nasolacrimal duct. The ultrasound appearance and differential diagnosis will be discussed. Ocular adnexal abnormalities are rarely identified on prenatal scans. Previous abnormalities in the literature have included 1 dacryoceles as well as reports of a retrobulbar cyst with proptosis, orbital hemangioma, Goldenhar's syndrome, anophthalmia, encephalocele and craniofacial disorders, such as Apert's and Crouzon's syndromes. This patient's ultrasound appearance, although alarming to the radiologists, allowed timely discussion of the disorder with the parents and early, effective management of the dacryoceles.

P16-0028

DEMOGRAPHICS OF CORNEAL TRANSPLANTATION IN CANADA: A SURVEY OF CORNEAL TRANSPLANTATION SURGEONS AND EYE BANKS

Kathy Cao, Stephen Dorrepaal, Allan Slomovic

Purpose

To determine the demographic characteristics of Canadian corneal transplantation surgeons (CCTs), donor tissue availability and waiting list status for each province and to identify the main factor(s) limiting the availability of penetrating keratoplasty (PKP) in Canada.

Methods

An anonymous voluntary survey of all CCTs was conducted from June to September 2004, with a concurrent voluntary survey of all eye banks in Canada.

Results

The geographic distribution of the 76 CCTSs was as follows: British Columbia, 13 (17%); Alberta, 9 (12%); Saskatchewan, 3 (4%); Manitoba, 6 (8%); Ontario, 28 (37%); Quebec, 13 (17%); and Atlantic Canada, 4 (5%). Manitoba had the highest number of CCTSs per capita and Atlantic Canada the lowest. The CCTS survey response rate was 70% (53/76). Most of the respondents were male (45/53 [85%]). Their mean age was 49 (standard deviation [SD] 8) years, mean time in practice 18 (SD 9) years and mean predicted time until retirement 13 (SD 6) years. Their mean time working was 52 (SD 12) h/wk for 46 (SD 3) wk/yr. On average, 15.7% of their operating room (OR) time was spent on PKP, 57.1% on cataract extraction with intraocular lens implantation and 11.0% on refractive surgery. They performed a mean of 1 (SD 1) PKP/wk and 40 (SD 33) PKPs/yr. The mean waiting time from date of referral to initial consultation with a CCTS was 10 (SD 7) weeks and from consultation to PKP 51 (SD 32) weeks. The mean number of patients on each CCTS's waiting list was 50 (SD 63). Donor tissue shortage was the factor selected as the main contributor to waiting time by the most respondents (33/51 [65%]). However, insufficient OR time was selected as the main contributor by the most Ontario respondents (17/21 [81%]). The response rate for the eye bank survey was 70% (7/10). Ontario was the only province in which all CCTSs scheduled PKP electively and regularly exported its surplus corneal tissue.

Conclusions

In Canada, on average, the waiting time from consultation with a CCTS to PKP is approximately 1 year, with 50 patients on each CCTS's waiting list and only 1 PKP performed per working week. The main contributor to waiting time is lack of donor tissue in all provinces except Ontario, which has an adequate supply of tissue but insufficient OR time.

P17-0075

INFECTIOUS KERATITIS AFTER OVERNIGHT ORTHOKERATOLOGY IN CANADA

Natasha Yepes, Sao Bing Lee, Vivian Hill, Mike Ashenhurst, Patrick Saunders, Allan Slomovic

Three patients were using overnight orthokeratology lenses when they presented with unilateral corneal ulcers. The organisms isolated were *Acanthamoeba*, *Pseudomonas aeruginosa* and *Serratia marcescens*. The clinical presentation and treatment of each case will be presented. Overnight orthokeratology may be associated with infectious keratitis despite the use of more oxygen permeable materials and improved lens design. Patient education with informed consent, appropriate lens care

and meticulous follow-up are important. As this complication is potentially sight-threatening, orthokeratology requires further analysis and evaluation to establish its safety. The present cases are among the first few reported cases in North America.

P20-0131

CORNEAL REEPITHELIALIZATION AFTER POSTOPERATIVE USE OF 0.5% MOXIFLOXACIN IN PENETRATING KERATOPLASTY

Natasha Yepes, Michael Hyams, David S. Rootman, Allan Slomovic

P21-0016

NEEDLING BLEB REVISION WITH MITOMYCIN C IN FAILED MOLTENO TUBE IMPLANT

Reza Zarei

Purpose

Needling bleb revision with mitomycin C is an accepted method of managing failed trabeculectomy with encapsulated blebs. This study evaluated its use for poorly functioning filtering blebs over a Molteno drainage device.

Methods

Bleb revision with mitomycin C was performed in 1 eye in each of 16 patients with encapsulated blebs around Molteno plates and increased intraocular pressure (IOP) that was uncontrolled medically.

Results

The patients were aged 5–65 (mean 28.8, standard deviation [SD] 22.7) years; 10 (62.5%) were male. Aphakia and congenital glaucoma were the most common causes of increased IOP. The mean follow-up time was 24 months and the mean interval between surgery and needling 18.25 (SD 12.1) months. The mean IOP reduction was from 28.25 (SD 3.70) to 16.69 (SD 3.14) mm Hg at 3 months and to 21.13 (SD 4.11) mm Hg at 6 months. The success rate was 87.5% at 3 months, 37.5% at 6 months and 12.5% after 2 years' follow-up.

Conclusions

Needling bleb revision with mitomycin C is useful in managing failed encapsulated Molteno tube implant.

P22-0054**EFFICACY AND SAFETY OF LATANOPROST VERSUS TIMOLOL MALEATE GEL-FORMING SOLUTION IN PRIMARY OPEN-ANGLE GLAUCOMA OR OCULAR HYPERTENSION****Paul Harasymowycz, Cindy M.L. Hutnik, Marcelo Nicoleta, William C. Stewart****Purpose**

To compare the efficacy and safety of latanoprost and timolol gel-forming solution (TGFS).

Methods

Patients were randomly assigned to use 0.005% latanoprost or 0.5% TGFS once every evening for 8 weeks. They then used the other medication for 8 weeks. Intraocular pressure (IOP) was measured every 2 hours from 8 am to 8 pm at baseline and in weeks 8 and 16. Safety was assessed at all visits.

Results

The reduction in mean diurnal IOP at week 8 was significantly greater in the 35 latanoprost-treated patients than in the 40 TGFS-treated patients (-6.9 [standard deviation (SD) 3.0] mm Hg vs. -5.5 [SD 2.4] mm Hg, $p = 0.034$). Switching from TGFS to latanoprost resulted in a further significant IOP reduction (-1.4 [SD 1.8] mm Hg, $p = 0.002$) at week 16, whereas no statistically significant change was seen in the group switched from latanoprost to TGFS (0.2 [SD 2.1] mm Hg). No significant difference in safety was seen between the 2 groups.

Conclusions

Latanoprost is more effective than TGFS in reducing IOP.

This paper has received funding from Pfizer Canada Inc.

P23-0082**EFFECTIVENESS AND SAFETY OF XALACOM VS. TIMOPTIC-XE PLUS XALATAN IN THE TREATMENT OF OPEN-ANGLE GLAUCOMA AND OCULAR HYPERTENSION****Megumi Iizuka****Purpose**

To compare intraocular pressure (IOP), safety and patient satisfaction with Xalacom versus Xalatan plus Timoptic-XE (0.5%).

Methods

Patients with glaucoma controlled with the use of Xalatan every night and Timoptic-XE every morning were randomly assigned to either

continue their current therapy (25 patients) or switch to Xalacom every night (24 patients). IOP was measured at baseline and at 4 and 12 weeks, and a questionnaire was administered at 12 weeks.

Results

The Xalacom group showed a statistically significant IOP increase of 0.7 mm Hg at week 4 ($p = 0.04$) but only a trend toward significance at week 12 ($p = 0.11$). Patients preferred the 1-bottle regimen of Xalacom over the 2-bottle regimen.

Conclusions

Switching patients to Xalacom from Xalatan and Timoptic-XE resulted in a small increase in IOP at week 4. However, the increase in IOP at week 12 was not significant.

This paper has received funding from Pharmacia-Pfizer, Merck Frosst.

P24-0089

CAN CLINICAL FEATURES DISTINGUISH ANGLE CLOSURE FROM PSEUDOPLATEAU IRIS VS. PLATEAU IRIS?

Shefalee Shukla, Karim Damji, Diane Chialant, Paul Harasymowycz, Robert Chevrier, Ralf Buhrmann, David Marshall, Irene Pan, William Hodge

Purpose

To determine whether clinical factors can differentiate patients with pseudoplateau iris from those with plateau iris.

Methods

Cohort study of 76 consecutive patients at an ultrasound biomicroscopy (UBM) clinic with plateau iris or pseudoplateau iris. The diagnosis of pseudoplateau iris included iridociliary sulcus cysts abutting the peripheral iris.

Results

Patients were 26–88 years of age, and 26% were male. Patients with pseudoplateau iris were more likely to be male, be younger, have a “bumpy” peripheral iris appearance and have less gonioscopic angle closure than those with plateau iris. Spherical equivalent was not significantly different between the 2 groups.

Conclusions

In patients referred for UBM, younger males with a bumpy peripheral iris have a higher likelihood of having a diagnosis of pseudoplateau iris. However, clinical factors do not appear to discriminate well between pseudoplateau iris and plateau iris; UBM can uncover the underlying mechanism and in some cases guide therapy.

P25-0102**THE BLINDNESS OF JOHN MILTON****Kevin Ramsey, Shannon Murray, T. Jock Murray, Charles E. Maxner**

John Milton's life and work were profoundly affected by his blindness. It caused him to explore different avenues in his poetry and likely saved him from execution. But what caused his blindness? Since Milton's death, many ophthalmologists have attempted to diagnose his illness based on his own written observations. The authors asked 50 neuro-ophthalmologists to diagnose Milton's blindness. Thirty-three responded, and their findings will be presented together with observations from leading ophthalmologists throughout history.

P26-0111**EFFECT OF VERBAL VS. WRITTEN INSTRUCTIONS AND OF A DELIVERY AID ON COMPLIANCE WITH GLAUCOMA MEDICAL THERAPY****Zakaria Tadrous, Leonard Teye-Botchway, Teresa Jantzi, Cindy M.L. Hutnik****Purpose**

To identify the effect of verbal and written instructions and of a new delivery aid, Xal-Ease, on compliance with prescribed eye drop treatment among patients with glaucoma.

Methods

Sixty patients with glaucoma requiring eye drops were randomly assigned to 1 of 3 groups: control, education or education plus use of Xal-Ease. On an initial visit and on a treatment follow-up visit, patients completed questionnaires and were observed instilling their eye drops.

Results

Patients in the education group found physician office-based verbal instructions more helpful than take-home written instructions (100.0% vs. 85.7%); however, this trend was not significant. More patients in the education plus Xal-Ease group than in the education group reported that bottle design increased their ability to instil eye drops (75.0% vs. 20.0%, $p = 0.010$).

Conclusions

Patients find physician office-based verbal instructions more helpful than take-home written instructions. As well, the Xal-Ease device increases patients' ability to instil eye drops.

This paper has received funding from Pfizer Canada Inc.

P27-0019**BILATERAL ACQUIRED RETINAL MYELINATED NERVE FIBRES AND OPTIC DISC DRUSEN IN A PATIENT WITH KABUKI SYNDROME****Sébastien Labbé**

A patient with Kabuki syndrome has been followed for 10 years at a pediatric neuro-ophthalmology clinic. Serial neuro-ophthalmic evaluation, fundus photography and neuroimaging have shown the appearance and progression of retinal myelinated nerve fibres and optic disc drusen after an episode of pseudotumour cerebri. No signs of optic neuropathy have been detected. Kabuki syndrome is rare, and these acquired abnormalities are rarer still.

P28-0039**DETERMINATION OF PHENOTYPE BY GENETIC ANALYSIS IN AUTOSOMAL DOMINANT OPTIC ATROPHY, A HEREDITARY CONDITION WITH INCOMPLETE PENETRANCE AND VARIABLE EXPRESSIVITY****Johane M. Robitaille, Joan Parkinson, Binyou Zheng, Jill Beis, François Tremblay, Charles Maxner, Duane Guernsey****Purpose**

We studied a family with autosomal dominant optic atrophy (ADOA) and electroretinogram (ERG) abnormalities to identify the causative gene and to characterize the phenotype in affected members.

Methods

We recruited 16 family members and performed linkage analysis of the 2 known loci and direct sequencing of the *OPA1* gene.

Results

A Q217term mutation in the *OPA1* gene was identified in 4 of the 5 members with unambiguous optic atrophy. The mutation did not segregate with the ERG abnormalities. The fifth family member represents a phenocopy of the disease.

Conclusions

ADOA in this family is due to an *OPA1* mutation that does not segregate with the ERG abnormalities, which suggests that these abnormalities are not associated with ADOA. Identification of gene mutations in conditions demonstrating incomplete penetrance and variable expressivity is critical for accurate description of the phenotype of hereditary conditions.

P29-0070**GENETIC ANALYSIS AND MUTATION EFFECT ON THE VARIATION OF PHENOTYPE OF AUTOSOMAL DOMINANT OPTIC ATROPHY: VISUAL FIELD FINDINGS****Joan Parkinson, François Tremblay, Jill Beis, Inge De Becker, Charles Maxner, Binyou Zheng, Duane Guernsey, Johane Robitaille****Purpose**

We describe the incidence, nature and location of visual field abnormalities in 2 families with autosomal dominant optic atrophy (ADOA) and known *OPA1* mutations.

Methods

Goldmann perimetry was done. Eye movements were recorded (Ober 2) in 1 of 2 subjects who displayed abnormal eye movements. Linkage analysis to known ADOA loci and direct sequencing of the *OPA1* gene were performed.

Results

Four affected subjects in pedigree 1 (*OPA1* Q217term) and 10 in pedigree 2 (*OPA1* 2826delT) had fields tested. The 2 pedigrees showed similar field abnormalities (central defects and depression); the incidence of normal fields differed between the 2 pedigrees. Statokinetic dissociation occurred in 4 subjects, with associated microsaccadic eye movements in 2 of the 4.

Conclusions

Although there are differences in the visual field between the pedigrees, overlapping characteristic abnormalities are present. Statokinetic dissociation may occur in ADOA.

P31-0133**PATHOLOGY AND GENETICS OF BEST'S DYSTROPHY****T.K.M. Lee, C.C. Chan, D.Y. Mah, C. Sereda, Ian M. MacDonald****P32-0012****BILATERAL OPTIC NERVE HEAD HEMANGIOMA IN VON HIPPEL-LINDAU DISEASE****Ali Abdollahi, Ahmad Mirshahi, Zahra Hallaji**

Von Hippel-Lindau (VHL) disease is one of the phacomatoses. When there is only hemangioma of the retina or optic disc, the entity is called Von Hippel disease, but when there is central nervous system involvement or visceral hemangioma, the entity is called VHL disease. We report a

case of VHL disease with hemangiomas in various organs. A 22-year-old woman presented with gradual visual loss in the right eye. Her visual acuity was 20/80 and 20/20 in the right and left eyes respectively. Slit-lamp examination gave normal results, with no relative afferent pupillary defect. Subretinal fluid was detected in the papillomacular bundle of both fundi, with macular pucker in the right eye. Whole-body magnetic resonance imaging revealed a large hemangioma in the spinal cord. After 8 years the patient had significant visual loss in both eyes. To our knowledge, this is the first report of VHL with bilateral optic nerve hemangioma in Iran.

P33-0020

DIFFUSE UNILATERAL SUBACUTE NEURORETINITIS DUE TO BAYLISASCARIS PROCYONIS INFECTION

Kelly D. Schweitzer, Raúl García-Salinas, Karen L. McClean

Infected raccoons shed large amounts of highly resistant eggs of *Baylisascaris procyonis* in their feces. Ingestion of contaminated soil or hay or similar products may result in infection. We outline a case of ocular larva migrans in a 50-year-old man presenting with diffuse unilateral subacute neuroretinitis caused by *B. procyonis*. The parasite was visualized with direct ophthalmoscopy and identified as the causative agent by clinical, morphometric and serologic evaluation. It was destroyed by laser photocoagulation, by which time the patient's visual acuity had deteriorated to 2/200 in the affected eye. After 6 months, the visual acuity was 20/400. Infection by *B. procyonis* often results in eosinophilic meningoencephalitis and ocular and visceral larva migrans. Factors that predispose patients to various locations of invasion will be discussed. Ophthalmologists should be aware of the potential of this parasite to cause diffuse unilateral subacute neuroretinitis and significant visual loss.

P34-0024

MULTIFOCAL ELECTRORETINOGRAPHY IN THE ASSESSMENT OF EYES WITH RETINAL VEIN OCCLUSION

Mohammad Farahvash, Morteza Movasat, Ahmad Mirshahi, Marzieh Moradimogadam

Purpose

Multifocal electroretinography (mfERG) is a new, noninvasive tool with which to quickly assess retinal function. We studied the mfERG responses in patients with central or branch retinal vein occlusion.

Methods

Within 3 weeks of onset of retinal vein occlusion, we recorded mfERG responses at 61 discrete retinal locations in both eyes of 58 patients, 32 with central and 26 with branch occlusion. The classic m-sequence paradigm for the first-order kernel was used to calculate amplitudes and latencies in different grouped configurations.

Results

Statistical analysis showed that all mfERG parameters for the affected eyes or quadrants differed significantly from those for the fellow eyes and age-matched normative data. The P1 amplitude was significantly reduced and the P1 latency delayed in the affected eyes.

Conclusions

Multifocal electroretinography could be useful in clinical evaluation and determination of the severity of ischemia in retinal vein occlusion. Further studies are needed to evaluate its role in predicting serious complications.

P35-0026

CENTRAL RETINAL VEIN OCCLUSION: ROLE OF AXIAL LENGTH

Ahmad Mirshahi, Sasan Moghimi, Mahnaz Abdollahian

Purpose

To evaluate the role of axial length in central retinal vein occlusion (CRVO).

Methods

The study group included 30 patients with unilateral CRVO (19 ischemic and 11 nonischemic). The control group included 29 subjects who matched the study patients in age, sex and systemic hypertension and diabetes mellitus status. The axial length of both eyes of the patients and the control subjects was measured by means of A-scan ultrasonography.

Results

There was no statistically significant difference in mean axial length between the affected eyes and the unaffected eyes in the CRVO group (22.88 vs. 22.90 mm) or in the ischemic and nonischemic subgroups, or between the control eyes and the affected eyes in the CRVO group (23.11 vs. 22.88 mm) and subgroups.

Conclusions

Axial length may not be a risk factor for CRVO.

P36-0034**SMALL CILIARY BODY TUMOURS: ULTRASOUND BIOMICROSCOPIC ASSESSMENT AND FOLLOW-UP OF 42 PATIENTS****Daniel J. Weisbrod, Charles Pavlin, Khaled Emara, Mark Mandell, John McWhae, E. Rand Simpson****Purpose**

Detecting and following small tumours of the ciliary body is a particular challenge owing to the location of the tumours. The aim of this study was to evaluate these tumours through the use of ultrasound biomicroscopy (UBM).

Methods

We included 42 patients with ciliary body tumours less than 4 mm in diameter from our institution; the median follow-up time was 4.3 years. UBM was used to assess tumour characteristics including height, location, and internal and external features.

Results

The median initial tumour height was 2.05 (range 1.1–3.8) mm as measured by UBM. By 5 years after diagnosis, 5 (12%) of the tumours had exhibited growth. The mean growth rate was 0.026 mm/yr ($p < 0.001$).

Conclusions

UBM is a valuable tool for detecting and following small ciliary body tumours (those less than 4 mm in diameter), as these lesions may go undetected by other methods.

P37-0035**INHIBITORY EFFECTS OF ANGIOSTATIN ON RETINAL NEOVASCULARIZATION INDUCED BY OXYGEN IN THE MOUSE****Shuiqing Zeng, Xufang Sun****Purpose**

To observe the inhibitory effect of angiostatin on experimental retinal neovascularization induced by oxygen in the mouse.

Methods

Primary microvascular endothelial cells from mouse retina were cultured. Mouse models of hyperoxia-induced ischemic retinopathy were established. Angiostatin at 3 different dosages was injected into the vitreous. The nuclei of new vessel buds extending from the retina into the vitreous were counted under the light microscope and the numbers in the 3 groups compared.

Results

The number of nuclei of new vessel buds was significantly reduced ($p < 0.01$), by 42%, 57% and 82%, in all 3 groups of eyes.

Conclusions

Angiostatin can powerfully inhibit the growth of microvascular endothelial cells. Thus, the proliferation of retinal vessels may be suppressed by angiostatin.

P38-0037

MEFLOQUINE-INDUCED MACULOPATHY

Randy Walker, Kevin Colleaux

Antimalarial drugs such as chloroquine, hydroxychloroquine and quinacrine have been shown in various studies to have toxic effects on the retinal pigment epithelium (RPE). Mefloquine has been reported to cause a variety of adverse effects, but not retinal changes. We present a case of this previously unreported side effect of a drug that has become the mainstay in malaria prophylaxis. The patient, who had been taking a weekly dose of mefloquine (Lariam) for 18 months for malaria prophylaxis, was found to have bilateral macular RPE changes. The changes were visually insignificant, the patient demonstrating 20/20 corrected visual acuity bilaterally.

P39-0068

L'UTILISATION CLINIQUE DE L'ÉLECTRORÉTINOGRAPHIE MULTIFOCALE POUR ÉTABLIR L'EFFICACITÉ DU TRAITEMENT À LA VERTÉPORFINE CHEZ DES PATIENTS ATTEINTS DE DÉGÉNÉRESCENCE MACULAIRE EXSUDATIVE LIÉE À L'ÂGE

Marc Hébert, Houfar Sekhavat, Marie-Josée Fredette, Marcelle Giasson, Gilles Lalonde, Alexandre Sasseville, Kathy Francis, Mario Malenfant, Yvon Tardif, Benoit Cinq-Mars

Objectif

Nous avons testé l'utilité de l'électrorétinographie multifocale (ERGmf) comme mesure objective pour le suivi de patients traités avec la thérapie photodynamique.

Méthodes

La fonction maculaire de 14 yeux répondant aux critères des études TAP/VIP a été évaluée par ERGmf. Les analyses ont été faites à partir de la latence moyenne de l'onde ERG pour la région fovéolaire (0-5).

Résultats

Deux mois après la thérapie photodynamique, 8 yeux ont montré une amélioration de leur latence d'au moins 1,6 ms, 3 sont restés stables et 3 ont montré une détérioration. Cinq yeux ont amélioré leur acuité visuelle, 6 yeux sont restés stables et 3 ont montré une détérioration. Des 3 patients dont la latence s'est détériorée, 2 ont eu une baisse de l'acuité visuelle. Neuf patients ont montré une amélioration ou une stabilisation des deux paramètres.

Conclusions

L'ERGmf représente un outil additionnel pour le suivi des patients atteints de dégénérescence maculaire exsudative liée à l'âge.

This paper has received funding from Fondation Ophtalmologie R&D, Novartis Ophthalmics.

P40-0088

MELAS (MITOCHONDRIAL MYOPATHY, ENCEPHALOPATHY, LACTACIDOSIS, STROKE): A RARE CAUSE OF PIGMENTARY RETINOPATHY

Ryan Eidsness, Kevin Colleaux

An asymptomatic 36-year-old woman was initially seen by the retina service for a screening examination for newly diagnosed diabetes mellitus. She had a past history of sensorineural hearing loss but was otherwise well. On examination, a peculiar form of pigmentary retinopathy was noted. Four years later the patient experienced confusion, vertigo, neck pain and headache. She was found to have a right middle cerebral artery infarct and was given the clinical diagnosis of MELAS (mitochondrial myopathy, encephalopathy, lactacidosis, stroke). Mitochondrial disorders such as MELAS affect tissues that are the most dependant on aerobic metabolism. The result is a multisystem disorder that frequently affects the central nervous system, skeletal muscle, cardiac muscle and the eye.

P41-0099

TRIAMCINOLONE ACETONIDE AS AN ADJUNCT TO PHOTODYNAMIC THERAPY

Arif Samad, Sheila Lewis

Purpose

To review results of photodynamic therapy supplemented with triamcinolone acetonide for treatment of subretinal neovascularization.

Methods

Retrospective noncomparative chart review of 50 patients treated with photodynamic therapy plus triamcinolone acetonide followed for 12–30 months.

Results and Conclusions

Analysis will determine the number of treatments until cessation of leakage on fluorescein angiography, change in lesion size, area and vision. Subgroup analysis will be based on lesion etiology and composition. Complications of sub-Tenon administration of steroids will be reported.

P42-0107

SENSITIVITY OF THE OPTOS PANORAMIC200 WIDE-FIELD SCANNING LASER OPHTHALMOSCOPE IN DETECTING LESIONS ANTERIOR VS. POSTERIOR TO THE EQUATOR

Paul Mackenzie, Patrick Ma, Matt Russell, David Maberley

Purpose

To compare the sensitivity of the Optomap Panoramic200 imaging system in detecting retinal lesions anterior versus posterior to the equator.

Methods

Optomap images of both eyes were obtained in patients with peripheral retinal disease and in normal eyes. Images were interpreted by a retinal specialist for the presence of peripheral retinal disease and were compared to a “gold standard” clinical examination with scleral indentation by a retinal specialist. Sensitivities were compared for lesions posterior ($n = 30$) versus anterior ($n = 25$) to the equator.

Results

Optomap sensitivity in detecting lesions posterior to the equator was greater than 90% but was less than 30% for lesions anterior to the equator.

Conclusions

Given the anterior location of most retinal tears, the Optos imaging system is unlikely to be of great use in screening for tears and holes.

P43-0108

SYNCHROTRON IMAGING OF PORCINE EYES

Dustin Coupal, Michael Kelly, Cole Beavis, Lauren Allen, Elaine Shultke, Kenneth Romanchuk, Bernhard Juurlink, Dean Chapman

Purpose

To examine porcine eyes using a novel synchrotron imaging technique.

Methods

Three formalin-fixed porcine eyes were studied at the National Synchrotron Light Source in Brookhaven, NY, using a diffraction enhanced imaging (DEI) technique.

Results

Images of porcine eyes were obtained by means of synchrotron imaging and the images examined. The images showed detailed views of ocular structures that are often poorly visualized using conventional imaging techniques. The choroidal vasculature was especially well visualized.

Conclusions

To our knowledge, this is the first report of imaging of eyes using the novel technique of DEI and synchrotron radiation.

P44-0027

SOME ECTODERMAL SYNDROMES IN OCULOPLASTICS

Royce Johnson

This paper reviews several rare ectodermal syndromes of relevance to oculoplastic surgeons. Cases are presented, along with the results of a literature review. Recognition of these rare syndromes can allow directed care.

P45-0062

BASAL CELL CARCINOMA OF THE CARUNCLE

David Rossman, Bryan Arthurs

Basal cell carcinoma of the caruncle is an extremely rare but distinct entity. An 82-year-old man presented to the oculoplastics service with a 2-month history of a slowly enlarging, whitish nodular lesion of the caruncle. The caruncle was excised. Histopathological examination showed a nodular basal cell carcinoma. We will review the differential diagnosis of caruncular lesions. Ophthalmologists should be aware of possible underlying malignant disease with suspicious caruncular lesions.

P47-0132

REDUCTION OF INTRAOCULAR PRESSURE FOLLOWING PHACOEMULSIFICATION AND INTRAOCULAR LENS IMPLANTATION IN PATIENTS WITH PRIOR RELIEF OF PUPILLARY BLOCK BY LASER IRIDOTOMY

J.Y. Wong, Andrew Crichton

P48-0134

A COMMUNITY-BASED EVALUATION OF A NEW LUBRICANT FOR DRY EYES

Allan R. Slomovic, Barbara Caffery, Keith Gordon, Michael Hyams, Robyn Beck