

Record-breaking PAC

Nigel Best, Ian Dunning and Bill Harvey look back at this year's Professional Advancement Committee conference which was the best-attended yet

Around 1,600 delegates packed the International Convention Centre in Birmingham on 16 October to enjoy a varied programme of CET, organised by Specsavers' Professional Advancement Committee (PAC).

Four parallel tracks were designed to enable practitioners to pick and choose from a range of topics, encompassing the differential diagnosis of subtle retinal signs to advances in the prevention of myopia progression in children.

EYE DISEASE AND VISION

Ophthalmic surgeon **Gavin Orr** gave the first lecture of the day on the epidemiology and management of diabetic eye disease. He reminded us that diabetes is still the major cause of blindness in the western world, resulting in 1,000 new blind registrations a year in the UK alone.

Patients with juvenile-onset diabetes develop predominately proliferative diabetic retinopathy, while those with maturity-onset tend to develop macular oedema. The pathogenesis of non-proliferative diabetic retinopathy leads to closure of and leakage from retinal capillaries. Retinal ischaemia can then cause new-vessel formation. Treatment can be medical, such as diet, oral hypoglycaemics, insulin and so on, or with a laser (primarily photocoagulation). He then advised on the urgency of referral required for different levels of retinopathy.

The lecture by **Professor Bruce Evans** on paediatric binocular vision disorders first of all considered how an optometrist would investigate the comitancy/incomitancy of a binocular vision anomaly. He warned how an incomitant deviation of sudden onset is usually caused by an accident or pathology and requires immediate attention.

He then went on to discuss the investigation of heterophoria, summarising the factors, which can cause decompensation and associated symptoms. In covering strabismus investigation, he talked about sensory adaptations, motor deviation and amblyopia. The preferred treatment for



Dr Jan Bergmanson delivers his keynote lecture on dry eye diagnosis and management

horizontal deviations is refractive while prismatic correction is the preferred treatment in small/moderate vertical deviations. In concluding he said that an optometrist should always be on the lookout for pathology and if you are treating or correcting a condition without significant improvement then you should refer.

Dr Shehzad Naroo's lecture focused on preoperative and postoperative assessment of refractive surgery patients. He began his lecture by contrasting the different routes by which a patient could receive ophthalmic surgery, such as optometric referral for cataracts, emergency referral from an accident and emergency department for trauma cases and elective procedures such as refractive surgery. He then suggested some tests that may be used pre and postoperatively to ascertain a patient's suitability for surgery, the likelihood of a successful outcome and the subsequent success of the procedure.

These tests include visual acuity testing, full refraction, corneal topography (particularly with refractive surgery candidates) and intraocular pressure measurements. He emphasised the importance of cycloplegic refraction of all refractive surgery candidates, as results could differ significantly from a refraction without prior cycloplegia.

Dr Jim McCaul, a maxillofacial surgeon from the West of Scotland, gave a lecture which will be forgotten by few delegates who were lucky enough to see

it, with increasingly shocking slides of patients who had been assaulted by fist, knife and even chainsaw. His equally gruesome slides showing how he and his colleagues repair these damaged bones and soft tissues were both awe-inspiring and humbling. He talked the delegates through case histories of patients who had malposition of one globe and explained how this could be surgically corrected with excellent results in terms of both binocularity and cosmetic appearance.

He accepted that most of these patients present first to A & E but that occasionally some more minor assaults may present to an optometrist, for example, if the patient's glasses have been broken. A devastating consequence of orbital trauma can be retrobulbar haemorrhage which can lead to loss of sight in the affected eye in as little as 20-30 minutes.

Mr Mark Benson, an ophthalmic surgeon specialising in retinal disease, gave a very well received summary of acute retinal disorders. He began with the classic 'flashes and floaters', explaining the origins of each and how an optometrist should handle these patients when they present. He explained that to exclude the possibility of a retinal tear, indirect ophthalmoscopy with scleral indentation should be performed. If an optometrist decides referral is unnecessary he must clearly record his reasons on the record card and warn the patient about retinal detachment symptoms.

He asked the audience not to discuss

the urgency of any required treatment with the patient as, depending on the position of the tear, surgery may not be necessary immediately. He then described signs, symptoms and management for a number of acute retinal disorders including macular holes and retinal vein and arterial occlusions. This lecture was excellent, it is just a shame that Benson only had an hour to pass on his wisdom to the delegates.

Monique Hope-Ross gave advice on how optometrists could refine their diagnostic skills in patients with age-related macular degeneration (AMD). It is now estimated that there are 200,000 people aged at least 75 years-old with AMD in the UK. The aetiology is largely unknown, but there is believed to be an interplay of genetic and environmental risk factors, in particular smoking. Non-neovascular AMD is characterised by drusen, retinal pigment epithelial atrophy and hyperpigmentation. Neovascular AMD is characterised by choroidal neovascularisation (CNV), with haemorrhages, exudates, neurosensory retinal detachments and retinal pigment epithelium (RPE) detachments. CNV can be further classified into classic and occult and fluorescein angiography is used to differentiate between these two. Laser photocoagulation is of proven benefit in those with extrafoveal CNV. Photodynamic therapy has been shown to be beneficial in both classic and occult CNV but, so far, NICE guidelines recommend its use only for classic CNV. New anti-angiogenic factors which inhibit vascular endothelial growth factors will be available to ophthalmologists in the next few years. Hope-Ross expressed the opinion that macular assessment with a direct ophthalmoscope through an undilated pupil falls below the standards required for accurate examination of our patients.

Professor Bernard Gilmartin lectured on the prevalence, parameters and prevention of myopia. The prevalence of myopia has increased over recent decades and now approaches 10-25 per cent in the west and 60-80 per cent in the east. Around 60 per cent of myopia is early onset, in other words between nine and 11 years of age with progression throughout early teenage years stabilising at about -3DS to -4.00DS. Between 8 per cent and 15 per cent of cases can be classified as late onset, typically between 15 and 18 years-old, with slow progression to low levels, at about -2.00DS. Scientists have recently concluded that the available evidence for myopia intervention in children is inconclusive, although they have acknowledged the reported efficacy of atropine therapy. In concluding, Gilmartin felt that advances in biological sciences in the 21st century would probably confirm that heredity predominates in myopia's genesis.



Mark Benson gave a well-received summary on acute retinal disorders

The keynote lecture on dry eye diagnosis and management was given by **Dr Jan Bergmanson** from the University of Texas. The severely dry eye is usually dealt with in a hospital setting, while the moderately dry eye (MDE) is a more likely visitor to our practices. He then described a new questionnaire designed to differentiate 'normals' from patients with MDE. He recommended lissamine green over rose Bengal and a Wratten No.12 filter for fluorescein evaluation. Evaporative dry eye is suggestive of lid disease, most commonly bacterial blepharitis. Some patients simply have a reduced tear supply, which is best checked by testing tear volume; Bergmanson advised the phenyl red thread test over Schirmer's.

In these patients, supplemental tears are needed. Unidose dispensers are preferred to preserved multidose and the viscosity agent may have to be varied to find the most appropriate. When tear supplements are not sufficient, punctal plugs should be considered.

CONTACT LENS MATTERS

To start proceedings in a packed contact lens track, **Caroline Christie** gave a fast-moving presentation which highlighted why practitioners should still be considering gas permeable lenses as part of their

armoury.

She addressed the image problem by suggesting we drop the word 'rigid' when describing the lenses. We should make more effort to make the patient want to try gas permeables, emphasising the benefits using positive terms, such as 'lens awareness' rather than discomfort when discussing the initial sensation, and 'gradual adaptation' opposed to a lengthy build up. She discussed all the benefits of gas permeable lenses, both for the patient and the practice, before moving on to more detail on toric and bifocal fitting.

The topical subject of myopia control using orthokeratology was addressed at some length with a suggestion that this should be an option to consider for the patient with moderate myopia or low with-the-rule astigmatism seeking freedom from spectacles or conventional contact lenses.

Moving on, Christie recognised that GP lenses are not without problems and she covered some of the more commonly encountered problems such as 3 o'clock and 9 o'clock staining and how to deal with these in practice. In summary, she suggested that we should not ignore GP lenses and if promoted in a positive fashion there is no reason why this modality cannot continue for the foreseeable future.



Jenni Brown spoke to delegates about the prescribing of coloured and selective tints in the management of specific reading disabilities

Bill Harvey: Low vision requires a multidisciplinary approach



Ron Loveridge began by addressing the oxygen benefits of silicone hydrogel lenses over traditional and disposable soft lenses. He discussed the oxygen requirement of the cornea and how silicone hydrogel lenses have helped minimise ocular responses and that healthy lenses equal healthy eyes. The surface properties of the lenses were explained, along with the importance of surface wetting, plus the benefits of maintaining the tear layer for all-day comfort were discussed in detail.

Surface treatments, the use of wetting agents, and comfort drops all ensure good surface wetting, which will result in all-day comfort, consistent vision, as well as minimising the symptoms of dry eyes and patient drop outs.

Loveridge then gave an update on the latest clinical evidence on adverse reactions, and inflammatory complications encountered when wearing silicone hydrogel lenses. He commented that the stiffer materials had increased the number of mechanical complications, however with newer designs and less stiff materials we are now able to manage these conditions. He suggested that microbial keratitis with silicone hydrogel is reported to be significantly lower in extended wear and daily wear than equivalent soft lenses. He then focussed on in-practice clinical advice with a number of case studies where the conclusion was that silicone hydrogel lenses may still be associated with some ocular responses, but the advantages of silicone hydrogel far outweigh the disadvantages and recommending them is clinically justifiable.

Instrumentation from consulting room, manufacturers, and research labs was covered by Naroo in this presentation. We started with a brief description of a pupil-measuring device, followed by details of the Tearscope with illustrations of the various wave patterns visible depending on the tear chemistry. Naroo then discussed the various types of keratometer

commonly used and covered in detail the benefits of each type of instrument when used in practice. He then explained that keratometers have a number of inherent problems, among other things they measure a small area of the corneal radius not less than 1mm and up to 1.7mm from the centre, plus they do not allow for the decentration of corneal apex or for corneal asphericity.

This lead us into corneal topographers and the benefits they can bring. Not only can the practitioner measure the cornea in great detail, but they can also aid GP lens-fitting by using the computer to derive the fluorescein picture that would be seen if a lens was inserted. Corneal topographers are also an essential tool when considering ortho-k. The data can also be extrapolated to calculate surface profile aberrations which can be used to design bespoke contact lenses. Aberrometry can be used to help describe visual anomalies that some patients experience even when using their best-corrected refractive correction. It was stated that, in the near future, evolution of expertise we can expect to see GP lenses that are custom-made to fit the corneal profile using topography information and then using aberrometry information the contact lens is able to correct high and low-order aberrations, thus giving the patient fewer visual anomalies and maybe improved visual acuity.

Cheryl Donnelly started by stating that up to 45 per cent of eyes have astigmatism of 0.75DC or more, she then went on to say that a high proportion of contact lens drop-outs are astigmats. We also heard that Eurolens Research data from 2004 show eye care practitioners are still only fitting 28 per cent of new wearers with a toric soft contact lens. She then stated that fitting soft toric contact lenses has never been easier, with a wide range of lenses materials and designs available.

Donnelly then moved on to discuss how a toric lens stabilises on the eye, explaining that it is now appreciated that the correct

orientation of toric lenses occurs as a result of lid pressure across the lens profile. She went on to discuss the different methods of stabilisation, explaining that the vast majority of disposable soft toric lenses have a toric back surface. She then moved onto the basic principals of fitting soft toric lenses and the view that, as a rule, lenses should be fitted looser rather than tighter, consistent with good fit, movement and acceptable patient comfort. She then discussed soft toric lens designs available on the market including the yet to be launched Acuvue Advance Toric, followed by some basic problem solving techniques before ending with alternative approaches to correcting astigmatism using aberration-controlled lenses.

Quoting a paper by Vaz and Grundel comparing a patient's subjective response wearing spherical as compared to aspheric design lenses, she described how the study had found that asphericity was preferred subjectively, though objectively there was no difference. In a further study by Morgan & Hill, aspheric correction was compared with toric correction using low- and high-contrast visual acuity, while also taking into account pupil sizes. It was reported that the toric provided similar levels of acuity to a spectacle correction, the aspheric provided acuity which was between half a line and a line reduced. The argument for increasing toric lens new fits seems a strong one.

DISPENSING AND THE LAW

The conference was well attended by dispensing opticians and a dedicated strand was provided aimed at covering subjects more attuned to the dispensing optician's core competency requirements.

Interestingly, many of the dispensing optician delegates stated that much of the material presented in the other strands was of equal interest to them and likewise a number of optometrists could be seen attending the dispensing strand. There is great overlap in the CET competencies and clear differentiation between CET topics is perhaps no longer a simple matter.

Richard Wilshin began the dispensing track lectures with a presentation which should be of interest to all in a busy practice, as he reminded delegates of the legal responsibilities of the dispensing optician. The deregulation of the sale of optical appliances had important exceptions for which registered opticians and optometrists are still required. Importantly, Wilshin reviewed the implications of the recent Opticians Act 1989 (Amendment) Order 2005 – SI2005/848 which in effect introduce a basic principle that a person shall not sell contact lenses to anyone who does not have a valid specification, nor any appliance or zero-



Dr Jim McCaul delivers a lecture for those with a strong constitution

powered lens unless the sale is effected by or under the supervision of a registered practitioner. Obviously, exceptions to this include ready-made readers for the over 16 year-old age group, and cases where a valid contact lens specification may be satisfactorily acknowledged. He outlined how the move 'to allow patients to buy lenses by mail order or from the internet with confidence' had driven the amendment.

Sale of lenses from registered practice was still the legal responsibility of the attending professional. The seller of optical appliances, including plano prescription lenses and ready-made readers, had a responsibility to make arrangements for the person supplied to receive such aftercare as may be reasonable in their particular case. Exactly what these arrangements might be seems less than transparent at present.

Dr Fiona Fylan followed with a now familiar theme of hers, the importance of practitioners appreciating the psychological implications of presbyopia when prescribing and dispensing correction.

After reaffirming that many patients are not to be assumed as already understanding what presbyopia is and that it happens to everybody, Fylan went on to explain how the change to near vision often coincided with other age-related milestones and that an empathetic approach to the correction was justified.

Low vision is an area with increasing involvement of dispensing opticians and, as OPTICIAN's clinical editor, Bill Harvey, reminded delegates, many of the visual impairment pathway pilot schemes, as well as the Welsh low vision scheme, involved dispensing opticians integrally.

He then went on to take the delegates through a typical low vision assessment process. Understanding the nature of the cause of impairment was important, as many patients benefited from clear explanation and advice as much as from magnifiers. He recounted how many of his patients with 'the dreaded macula' have no real understanding of what it was

– an unforgivable state of affairs bearing in mind the prevalence of the condition in the UK. He then reviewed the various acuity charts used for those with reduced vision, explaining how logMAR scores allowed many advantages over a Snellen chart. Apart from the obvious point that having more letters on the larger target lines allowed less for guesswork and promoted a more accurate scoring, he also noted that the non-linear progression of line size meant that adjusting working distance necessarily changed the visual demand of the task. A typical 6/12 line viewed at 1 metre is not the same demand as the easier 6/24 line viewed at 2 metres.

On a more familiar dispensing theme, John O'Donnell, in his usual affable style gave a useful overview of the so-called occupational lenses and the best way to dispense them. For the correction of presbyopia in the typical office workspace, lenses with a progression from the intermediate to the near visual space were proving very popular and he reviewed how factors such as aberrations were kept to a minimum. Interestingly, he made allusion to future developments, including the

use of nanotechnology in anti-reflection coatings where the size of the component coating molecules were less than the wavelength of light and could actually 'integrate' with the plastic lens substrate. He also alluded to the new Ophthonix system which claims to provide aberration control by using wavefront technology in the design of spectacle lenses.

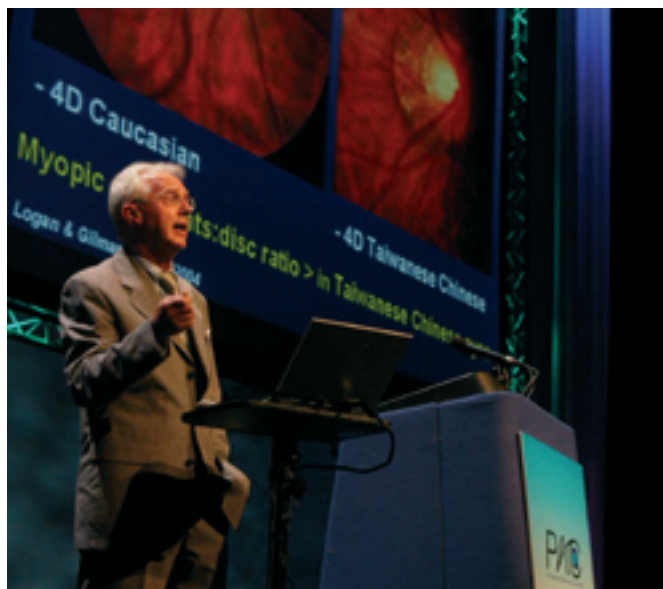
Jenni Brown gave a useful review of the prescribing of coloured and selective tints in the management of specific reading disabilities and emphasised how the interaction of different professionals was key to the adequate management of patients with such problems.

The dispensing track was rounded off with a familiar face in the progressive lens world, David Jones. He listed some of the common problems reported with new progressive lenses and then detailed the best approach to managing them or preventing them in the first place. Such advice included how to recognise the few patients who were not adapting well due to prism thinning of the lens. Signs included the patient lowering their head and looking above the fitting cross, complaints of restricted distance field, reports of a 'pulling or drawing' sensation, and complaints of poor intermediate vision. If the more obvious causes are ruled out (such as poor fitting), then intolerance to prism thinning might be suspected.

ROUTE TO SUCCESS

With points aplenty from the lectures, as well as further points from the OPTICIAN-supported CET quiz (reproduced on the CD-ROM in last week's issue) this event was a success if viewed purely as a point-gathering exercise.

However, the quality of the presentations and effectiveness of the organisation will make this a secure feature on future CET calendars.



Professor Bernard Gilmartin: Heredity is the key