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Return journey: Professor Efron flies in

Before returning from Australia for the BCLA's Pioneers Day, Professor Nathan Efron spoke to *OT*

Professor Efron, you're back in the UK for a short while – What tempted you away from Australia's summer and back to Britain in November?

The BCLA kindly invited me to be a featured speaker at the Pioneers Day meeting, which I was honoured to accept. This meeting has grown in prestige over the years and is now a recognised event on the international lecturing calendar. And, of course, this will be a great opportunity to meet up with colleagues and friends in London.

Tell us a little of your present work in Australia? You're involved in the Queensland University of Technology (QUT) aren't you?

My current title is 'Research Professor'. I work in a brand-new £30m, purpose-built research facility known as the Institute for Health and Biomedical Innovation (IHBI). Basically, all health-related research at QUT is incorporated within IHBI. There are seven research domains and I am the leader of the Vision Improvement Domain. My current research is in two areas: the conjunctival response to contact lens wear as assessed using corneal confocal microscopy (CCM), and the development of CCM as a sensitive marker of diabetic neuropathy.

Given your long experience, what are your thoughts on the contact lens market in the UK, and elsewhere, since you left these shores?

The contact lens market remains vibrant, largely fuelled by the silicone hydrogel contact lens revolution. More than 50% of the contact lenses fitted worldwide are now made from this material. We are now even seeing the introduction of daily disposable silicone hydrogel lenses, which are being released first in the UK.

The health benefits of this material are tremendous, and very little chair time is now wasted dealing with complications, which was a major drawback in the early years of contact lens practice with hypoxic and deposit problems.

Are patients well-served by the lens industry today compared to the recent past?

Definitely. There is now a fantastic array of lens types available to suit the requirements and needs of everyone. I feel the industry is striving to act in the best interests of patients by maintaining a responsible approach to lens supply within current regulatory and commercial constraints and pressures.

And how do you feel optical professionals, especially optometrists, view the contact lens sector nowadays?

I think those who work in the contact lens field are fortunate to have such great support from the contact lens industry, by way of, for example, sponsoring scientific and clinical meetings such as the BCLA Pioneers Day. The contact lens sector has fuelled the growth of some of the major optometry multiples and many practitioners will be grateful for that.

As alluded to above, the issue of contact lens supply routes is still a difficult one, and up until now the contact lens industry has been largely supportive of the optical professions.

What should UK optometrists do to improve the number of patients who wear lenses?

No one has ever really solved the problem as to why contact lens prescribing never exceeds about 6% of the population. The recipe for success for an individual practitioner is to provide good service and professional advice and place an emphasis on the health issues relating to contact lens wear and good compliance.

As to the BCLA debate on 'We don't need rigid lenses any more', what is your main reason for being behind this statement?

This is a complex issue, but to put it simply: rigid lenses are uncomfortable in the eye and cause permanent damage to the eyelids of all those who wear them. In this modern age, with such a vast array of lens materials, modalities and designs, there is simply no reason to subject patients to the misery of rigid lens wear.

...and what are your thoughts on the benefit of lenses for highly toric cornea?

It is now possible to correct any form of astigmatism with soft lenses, so the argument that high corneal toricity is an indication for rigid lenses – which may have been valid ten years ago – is no longer valid today.

Additionally what are your views on the well-known clinical arguments for superior surface optical quality of such lenses compared to soft lenses?

This is simply not the case. Modern approaches using aspheric optical designs result in vision with soft lenses that is just as sharp as that which can be achieved with rigid lenses. As rigid lenses move considerably on the eye and soft lenses are very stable overall visual performance is better with soft lenses.

Finally, on this area, what are your thoughts on the well-known clinical arguments for the superior tear exchange offered by such lenses?

This is perhaps the only area where rigid lenses are ahead of soft lenses, and probably explains why the incidence of severe keratitis is lower in rigid lenses than any form of soft lens. However, the lack of tear exchange with soft lenses may be overcome in the not-too-distant future, as the industry is currently developing novel soft lens back surface designs incorporating patterns, grooves and ridges to facilitate greater tear exchange. Early work in this regard does look promising.

What correction(s) would you advise for myopes/presbyopes who want to be spectacle-free?

Is this a trick question? Surely the answer is 'contact lenses' ... at least for ammetropes! Presbyopia is a difficult problem to solve, with bifocal and monovision contact lens corrections requiring significant optical and perceptual compromises. Laser refractive surgery has come a long way and now represents a viable alternative for many myopes and hyperopes, but it is not really suitable for correcting presbyopia.

You'll be debating 'Flux is better than Dk for describing the performance of contact lenses'. Eye care practitioners are familiar with Dk but may be not flux - can you explain what flux is please?

Flux ought to be the real parameter of interest because this is the term that defines how much oxygen is flowing into the eye during contact lens wear. A key consideration in respect of flux is the 'law of diminishing returns', which relates to the fact that the increase in flux with higher Dk values becomes less and less as Dk becomes very high. An important outcome of this theory is that all silicone hydrogel lenses are essentially equal in terms of their phenomenal oxygen performance.

With the advent of silicone hydrogels and known hyper-oxygen properties, is the measurement of oxygen still important?

We still need to measure Dk, but the values of individual silicone hydrogel brands are not important for the reasons outlined above. Important considerations when choosing a silicone hydrogel lens for a patient are surface lubricity and wettability, material modulus (stiffness), lens optics and water content.

'There is no such thing as CLPU'. What is your main argument for this? What is the cause for this type of lesion? How should this be managed?

I believe that 'contact lens peripheral ulcer' (CLPU) is a condition that can only be diagnosed retrospectively. In the early stages of developing a contact lens associated corneal lesion, there is no way of clinically diagnosing the difference between microbial keratitis (MK) and CLPU. You could tell the patient to 'wait and see' and come back the next day, but then if it turns out to have been an MK, its too late. The management when faced with such a situation is to 'play safe' – remove the lens and instill antibiotic drops.

So getting back to the Pioneers Day event, will we witness some 'Aussie straight talking', and if so which area in particular should we be watching out for?

I think the entire day will be fantastic! Short sharp presentations with an industry focus, debating contentious issues, honouring contact lens pioneers, and my evening lecture on the silicone hydrogel contact lens revolution should hopefully all be enjoyable. As well, the BCLA has hired an Audience Interactive System, which will be used extensively throughout the day to gauge audience opinion.

What about your fellow debators, any words on them?

It is a little daunting, as I am being put up against the very best and brightest clinicians and researchers that the UK has to offer.

I am genuinely honoured that such an impressive line-up of debating opponents has been assembled for this event.

What are you most looking forward to when you return to Britain?

Not the weather or the beer, that's for sure!