

# Publications on performance

Recent publications have provided new information on the complications of contact lens wear and eye symptoms among users

**P**atients' initial experience of contact lenses or a new modality is crucial to successful lens wear. The finding that most complications with continuous wear of a silicone hydrogel lens occur in the first three months is therefore important.

A multi-centre study published in July's *Eye & Contact Lens*<sup>1</sup> investigated inflammatory and mechanical complications associated with up to 30 nights' continuous wear of lotrafilcon A lenses. A total of 317 subjects (286 current wearers and 31 new wearers) were followed for three years.

The authors conclude that the rate of adverse events with lotrafilcon A was low in this cohort, with one-third of inflammatory events occurring in the first three months of wear. The rate of these events may be lower in practice than previously reported, they say. In this study, no subjects experienced microbial keratitis (MK), the most serious complication of CL wear.

This month also sees the latest publication from the Vision CRC's case-control study of risk factors for contact lens-related MK. The paper is published online by the journal *Eye*.

From retrospective analysis of 291 cases of presumed MK and 186 lens-wearing controls, Edwards *et al*<sup>2</sup> found that overnight soft contact lens use was associated with an increased risk of infection compared to daily disposable wear. Compared with older wearers, 15- to 24-year-olds had a 3.5 times greater risk of infection. Delaying treatment by 49 to 72 hours had a 4.5 times greater risk of visual loss compared to seeking treatment early. Practitioners should reinforce the importance of proper lens care at all times, and early presentation following the onset of symptoms.

### BILATERAL AK

The other serious complication that has again been in the news recently is *Acanthamoeba* keratitis (AK), following the recent outbreak among contact lens wearers in the US. An unusual case report<sup>3</sup> published in the July issue of *Eye & Contact Lens* is therefore timely.

Researchers at the Epsom and St Helier University Hospitals in

Surrey describe a case of bilateral AK in a patient who stored both lenses in the same storage case. Although an experienced contact lens user, the 44-year-old patient admitted to occasionally rinsing her CL case in tap water and leaving it to air dry.

The authors point out that although bilateral AK is rare, it is essential that patients are properly educated in contact lens hygiene and disinfection. They suggest the use of single-use storage cases may be advantageous in reducing the incidence of bilateral disease after case contamination.

### SYMPTOMS IN COMPUTER USERS

Recent studies have investigated the clinical performance of CLs in challenging environments and, in particular, when using computers. Many computer users complain of eye symptoms but these are often difficult to characterise. Are there differences between 'visual symptoms' and specific ocular symptoms associated with using video display terminals (VDTs)?

A study in July's *Contact Lens & Anterior Eye* by researchers at Glasgow Caledonian University and Kongsberg, Denmark,<sup>4</sup> assessed the reliability of self-reported symptoms associated with VDT use for 20 soft contact lens (SCL) wearers and 20 former SCL wearers who had undergone successful Lasik surgery for myopia in the two years prior to the study.

Subjects completed a detailed questionnaire on their general visual symptoms, headache and specific ocular symptoms such as dry eye associated with VDT use. Most (70 per cent) reported 'sometimes' experiencing some visual symptoms, 62 per cent reported headaches and 82 per cent reported specific ocular symptoms.

There were no obvious differences between the two groups either in frequency or severity of visual symptoms, headache or ocular symptoms. However, while the reporting of headache showed no obvious association with the number of ocular symptoms reported, the latter showed a clear correlation with the severity of visual symptoms.

For the authors, these results indicate that when an individual reports visual symptoms, they may actually

be recalling specific ocular symptoms. Visual symptoms should therefore be assessed separately to ocular symptoms so that the appropriate management can be selected. Previous CL wearers who have undergone successful Lasik are still likely to experience symptoms when undertaking computer-based work.

Evidence that eye symptoms can have a detrimental effect on computer users' well-being is provided in a paper in August's *Optometry & Vision Science*,<sup>5</sup> one of several papers dedicated to quality of life issues.

A survey of 1,000 university employees assessed visual and physical symptoms, job, physical and mental demands, ability to control/influence work, amount of work at a computer, computer work environment, relations with others at work, life and job satisfaction, and quality of life.

After adjusting for other factors, eye symptoms were significantly associated with both quality of life and with physical symptoms. The authors conclude that eye symptoms have a significant impact on computer users' quality of life. ●

● To access the abstracts and full text of these papers go to the journal website or enter [www.ncbi.nih.gov/entrez/](http://www.ncbi.nih.gov/entrez/) and search by author name.

### References

- 1 Donshik P, Long B, Dillehay SM *et al*. Inflammatory and mechanical complications associated with three years of up to 30 nights of continuous wear of lotrafilcon A silicone hydrogel lenses. *Eye & Contact Lens*, 2007;33:4 191-5.
- 2 Edwards K, Keay L, Naduvilath T *et al*. Characteristics of and risk factors for contact lens-related microbial keratitis in a tertiary referral hospital. *Eye*, 2007; August 17 [Epub ahead of print].
- 3 Voyatzis G and McElvanney A bilateral *Acanthamoeba* keratitis in an experienced two-weekly disposable contact lens wearer. *Eye & Contact Lens*, 2007;33:4 201-2.
- 4 Aakre BM and Doughty MJ. Are there differences between 'visual symptoms' and specific ocular symptoms associated with video display terminal (VDT) use? *CLAE*, 2007;30:3 174-82.
- 5 Hayes JR, Sheedy JE, Stelmack JA *et al*. Computer use, symptoms, and quality of life. *Optom Vis Sci*, 2007;84:8 739-756.