EDITORIAL

ACANTHAMOEBA – WHY NOW?

'*Acanthamoeba* is a genus of small free-living amoeba found in virtually all soil and aquatic environments'.¹ We are therefore surrounded by them, constantly immerse ourselves in them, have always done so, and yet we are becoming aware that the organism is increasingly a problem. At the same time we must remember that *Acanthamoeba*-related corneal problems are extremely rare.

One of the reasons for the staying power of *Acanthamoeba* is its ability to form cysts if threatened, and these cysts can resist most attempts at disinfection. In recent times we have unfortunately and increasingly provided the milieu for organisms to become involved in the eye through the use of contact lenses. Not the lenses themselves of course, but what we do or rather do not do to them.

Because lens care systems are reasonably efficient the majority of micro-organisms are eliminated even when the systems are misused. The result is that those organisms more difficult to deal with remain. A comparison can be drawn between the fact that such opportunistic infections as cytomegalovirus and *Pneumocystis carinii* occur only in the immune-compromised systems of people with AIDS, and the pathological appearance of *Acanthamoeba* in a partially cleaned and disinfected non-preserved contact lens system.

It is disappointing to find that the 'whiter than white' disposable lenses are being increasingly implicated in the *Acanthamoeba* saga. One has to ask why this is so. After all, they are just soft contact lenses being used in a different wearing regimen. Surely there should not be time for these problems to develop?

Perhaps the fact that until 1985 *Acanthamoeba* had scarcely been reported in ophthalmology² may relate in time to the increasing interest in preservative-free care systems that followed the Thiomersal toxicity dramas of the early 1980s.³ Chlorhexidine, benzalkonium chloride and Thiomersal with EDTA (the most commonly used solution preservatives) had been (and are) quite efficient in this context,⁴ but the kinder the systems are to the eye the kinder they are also to the micro-organisms with which they have to deal. On top of this these 'kinder' systems are usually rather more complicated to use and therefore more prone to patient adaptation (i.e. misuse); this is not acceptable in a situation where there is little margin of safety.

With the disposable lens we thought that 'lens care' could be simplified, but we had underestimated the coating that develops within hours around contact lenses (and the cases they are kept in). Micro-organisms can disappear into this layer and be protected from disinfection. The unfortunate part is that having spread the gospel of simplified care a few years ago there is no mechanism for recalling those concerned to improve on the advice they had been given.

Reports of contact lens complications must always include *Acanthamoeba* in their discussions to be in vogue. It is important to acknowledge that, although the paper by Bacon *et al.* in this issue shows that such infections are increasing, they are uncommon. Among contact lens culture-proven corneal infections, 75% are caused by *Pseudomonas* or staphylococcal organisms, *Acanthamoeba* accounting for less 1%.⁵

However, the appearance of *Acanthamoeba* keratitis as a regularly reported condition is a clear indication of inadequate lens care, taken in its broadest sense. The solution will lie in dealing with this problem.

Through an initiative of the Royal College of Ophthalmologists, the Department of Health set up a Work Group that has resulted in all those involved in optical care receiving a letter and booklet (that has a contact lens acknowledgement form attached). Its purpose was to give the subject a higher profile and thereby, it is hoped, to reduce a rare but worrying problem.

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References

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