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Broader definitions of clinical effectiveness are needed

EDITOR,—We are impressed with the move to evidence based medicine and clinical effectiveness. We strongly urge that the concept of clinical effectiveness¹ should be broad enough to include the alleviation of patients' anxiety and their satisfaction with care, not just improvement in clinical status. This broader view of effectiveness might be termed "doctor effectiveness."

The skill of doctors is not only what they do but the way they do it. Spending more time with a patient may be the most clinically effective procedure if they feel a "second opinion" from the accident and emergency department unnecessary, or that they don't need a scan or their prostatectomy yet.

Primary care has put greatest effort into this area, so far with results that are difficult to interpret. The potential gains include an improvement in patient satisfaction and understanding and a reduction in unnecessary referrals and treatment. Let's look at "doctor effectiveness"—but perhaps someone can think of a better term for it.

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Risk factors for acanthamoeba keratitis

Population study is required to confirm results

EDITOR,—Cherry F Radford and colleagues¹ highly publicised paper concerning possible risk factors for acanthamoeba keratitis in contact lens users contains some potentially misleading comments.¹ Their extrapolation of limited data into sweeping generalisations seems unhelpful in providing a rational approach to understanding of the multiplicity of factors associated with acquisition of this rare but potentially sight threatening condition. Frequent replacement of storage cases will not alone prevent acanthamoeba growth and replication if chlorine based disinfection is used, since these products do not generate sufficient active chlorine to destroy the activity of the amoeba cysts. We reported this two years ago.²

Their recommendation that hydrogen peroxide based systems with proven cysticidal effects be used is not novel³ and has been the subject of considerable debate.³ So called multipurpose solutions that both clean and disinfect soft contact lenses mostly depend for their antibacterial and

acanthamoebicidal action on the inclusion of polyhexamethylene biguanide (polyhexanide) in the product formulation. 0.0005% Of this agent has an acanthamoebicidal action but it is limited to a 2 log reduction only; at concentrations of less than 0.0005% there is no effective and consistent acanthamoebicidal action, especially against cysts. We have also advised that tap water, which may contaminate the contact lens storage case with microbes including acanthamoeba, should never be used as part of contact lens hygiene, and should not be recommended by manufacturers for use with their products, as currently occurs.

We agree with the Irish Opticians Board and Italian workers in recommending that wearers of soft contact lenses, especially those marketed as "disposables" but actually worn on one, two, or four weekly regimes, should ideally use a hydrogen peroxide disinfection system which is known to be effective against cysts of acanthamoeba.⁴ If peroxide is not used, then chlorine disinfection and multipurpose solutions that contain either polyquaternium-1 as currently available or ineffective polyhexamide formulations should be avoided. We realise that this includes many commercial products available for sale to the public but believe that the overriding criteria must be efficient acanthamoebicidal activity to prevent the occurrence of keratitis.

We are also concerned about the inference that Acuvue (Johnson and Johnson) "disposable" soft contact lenses provide an increased risk of acquisition of acanthamoeba keratitis. There is at present no evidence of a direct cause-effect relation between these contact lenses and microbial or acanthamoeba keratitis. In a particular area, these contact lenses may be prescribed more often, so that they seem to have properties predisposing their wearers to increased risk from acanthamoeba keratitis. Until data is available from carefully conducted, population based incidence studies, we contend that the observations made by Radford and colleagues, though important, can only be considered preliminary and may actually be artefactual.

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Single use disposable contact lenses should cut risk

EDITOR,—Cherry F Radford and colleagues show that the use of daily wear disposable contact lenses is a major risk factor for acanthamoeba keratitis, attributable largely to inadequate disinfection.¹

Analysing type of disposable contact lenses, the authors claim a crude minimum relative risk for Acuvue of 2.63. Acuvue were the first disposable lenses introduced into Britain and have been marketed nationwide from 1988. Since then the number of other makes has increased: in 1991, the contact lens yearbook listed 47. Infected cases for the study were collected over a three year period, for much of which Acuvue were the only disposables available. This was not the situation for the last six months, when controls were collected.

The use of disposable lenses is developing; single use one day disposables, where the users open a new sterile set in the morning and throw them away in the evening, were introduced into Britain in February 1995. The correct use of such lenses, which do not rely on disinfecting solutions, should dramatically reduce the risk of acanthamoeba and other infections. As no contact lens cleaning solution for conventional daily wear lenses is capable of eliminating acanthamoeba cysts, daily disposables may even prove safer than conventional daily wear soft lenses. This, as postulated by the authors of the study, may depend on any role that the different physical properties of disposables play in infection risk.

Any potential advantages, however, would be negated by incorrect use. Little work has been done on why people are drawn to use disposable contact lenses. A major factor must be the apparent, but misguided, idea that they require less arduous cleaning. Single use daily disposable lenses should avoid this problem, but may expose other dangerous practices. If, as backed by staff at Moorfields Eye Hospital, education is improved, it remains to be seen whether these new lenses will change the incidence of acanthamoeba keratitis.

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Nurses could halve GP workload

EDITOR,—There are two urgent reasons for promoting courses for a new breed of nurses: the shortage of applicants for general practice training, and stress imposed on general practitioners by an obligation to deal with trivia.

When local authority nurses were attached to practices I became aware of the Peter principle, which urges those in business to ensure that everyone in an organisation rises to the level of their incompetence. Accordingly, I began to delegate to nurses procedures such as cervical cytology, ear syringing, electrocardiographic recording, blood pressure recording, peak flow measurement, suturing simple wounds, and routine immunisations and maintenance therapy. I then saw all patients who made appointments, but audit showed that more than 60% of those attending reported with minor routine conditions, often self limiting and likely to lead me to lose skills acquired over 10 years.

Ten doctors served a population of 20 000 patients; one had special experience in paediatrics, one in geriatrics, and one had a higher medical qualification, enabling many referrals to be made internally. This led me to calculate that our practice population needed three full time doctors and 15 nurses, with three part timers able to step up their hours for study and holiday leave, and a deputising service could be used for out of hours calls when needed.

The editorial by Pamela Venning and Martin Roland¹ was right to suggest there may be a range of clinical roles for nurses to perform as well, if not better, but certainly more cheaply than highly trained general practitioners.

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