Figure 1 Fluorescein angiogram at presentation. (A) Patient's right eye at 3:02 post-injection demonstrates perifoveal leakage in a petaloid pattern and hyperfluorescence of the optic disc, both strongly associated with the Irvine-Gass syndrome. (B) Patient's left eye at 3:09 post-injection, shown for comparison. Note the absence of any perifoveal staining and absence of disc hyperfluorescence.

Figure 2 Optical coherence tomography of the right eye at presentation. Note the serous neurosensory detachment and the loss of the foveolar depression. There is no visible intraretinal oedema or cystic change in the perifoveal area.

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Two cases of *Burkholderia cepacia* endophthalmitis

Although *Staphylococcus epidermidis* is responsible for the majority of cases after cataract surgery, any bacteria may cause postoperative endophthalmitis. *Burkholderia cepacia* (previously known as *Pseudomonas cepacia*) is a Gram negative, oxidase positive, non-fermentative bacilli. *Burkholderia cepacia* does cause significant infection not only in cystic fibrosis, chronic granulomatous disease, and immunocompromised patients, but also in healthy individuals.¹ It has been shown to be resistant to some antiseptics such as benzalkonium chloride, chlorhexidine at standard or high concentrations, and even be alive in those antiseptics.²

Case 1

A 63 year old diabetic patient was diagnosed with endophthalmitis after an uneventful phacoemulsification and foldable intraocular lens (IOL) implantation. A vitreous tap was performed. Intravitreal vancomycin (1 mg/0.1 ml) and ceftazidime (2.25 mg/0.1 ml) were administered. Intravenous vancomycin (500 mg twice daily) and ceftazidime (500 mg twice daily) in addition to hourly topical fortified tobramycin and hourly cefazolin were added to the therapy. The vitreous culture grew *Burkholderia cepacia* on the third day. The identification of the organism was performed by standard biochemical tests and also with Analytical Profile Index for Gram Negative Identification (API 32 GN, Bio Merieux, France). It was sensitive to ceftazidime, ciprofloxacin, ofloxacin, and was resistant to ceftriaxone, cefoxitin and tobramycin, amikacin, and gentamicin.

Best corrected visual acuity (BCVA) was hand movements (HM) on the fourth day of the therapy. Pars plana vitrectomy (PPV) and injection of ceftazidime (1.12 mg/0.1 ml) were performed. Repeated vitreous sampling grew the same organism and antimicrobial susceptibility test was also the same as the previous culture. The patient was discharged from the hospital with a quiet anterior chamber and clear vitreous cavity. Two years later, the BCVA remains at 20/63.

Case 2

A 72 year old man presented with decreased vision and pain in the left eye 15 days after an uneventful phacoemulsification with foldable IOL implantation. BCVA was HM. Slit lamp examination findings were the same with patient 1. Treatment consisted of tap and injection of same dose of intravitreal vancomycin and ceftazidime. Three days later, BCVA was still HM and the hypopyon had not resolved. PPV and intravitreal reinjection of vancomycin and ceftazidime was performed. Hourly topical fortified tobramycin and cefazolin were added to the therapy. Vitreous culture grew *Burkholderia cepacia* on the fourth day. Antimicrobial susceptibility test was the same as the other patient. During the following days the anterior chamber and vitreous cavity cleared. At the 6 month follow up, his BCVA was 20/50.

Comment

To our knowledge, there are only two previously documented postoperative endophthalmitis cases following cataract surgery that were caused by *Burkholderia cepacia* (Medline search).^{3,4} One of the cases was a recurrent endophthalmitis.⁴ The organism has an unusually large genetic make up that accounts for its microbiological versatility. It also produces lipopolysaccharide and β lactamase that renders some antibiotics ineffective against it.⁵ Resistance to aminoglycosides noticed in the previously reported cases^{3,4} was also noted in our both patients. Close follow up for possible early PPV might be considered as our cases were not cured after the first intravitreal injections even though appropriate antibiotics were used.

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The first case was presented as a poster presentation at the XIIIth. Congress of the Afro-Asian of Ophthalmology, Istanbul, Turkey, in June 2004.

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MAILBOX

Dietary lutein and zeaxanthin: authors' response

We were interested to see the letter by Mitchell,¹ written in response to our earlier publication.²

Figure 1 Estimated odds ratios derived from the analyses, including all participants.

Mitchell raises several points, the first of which is the way one handles missing data. Age related macular degeneration (AMD) can be assessed either clinically or photographically. Rather than throw away data and run the potential of bias by excluding patients who did not have a retinal photograph, we chose to include in our analysis those people for whom we did not have a retinal photograph for one reason or another but for whom we had clinical macular grading. In separate analyses the data were not materially different if the analysis was confined to only those with photograding. In the data Mitchell *et al* report they excluded 15% of their sample as they lacked data and there is no evidence of what bias this may have induced.

We were very pleased to see the data from the Blue Mountains Eye Study (BMES) and recognise the advantage of incidence data over cross sectional data. However, both cross sectional and longitudinal studies are susceptible to recall bias in the ascertainment of historical dietary intake. In nutritionally non-deficient populations people do alter their diets in response to the available commercial information. However, the bias caused by public awareness of hypothesised protective associations applies equally to both cross sectional and longitudinal observational studies, as many know about either their disease or family predisposition to AMD before participation. However, our data were collected before the recent upsurge in publicity given to the use of nutritional supplement for macular degeneration.

The most striking thing from the data presented by Mitchell is that they show no evidence of a protective effect of dietary or supplement intake of lutein and zeaxanthin. The consistent finding of these two population based studies must seriously challenge the association reported by previous case control studies. Case-control studies are always strongly influenced by the possibility of bias in selection of controls. The fact that the dietary intakes in the two population based studies is so much lower than the volunteer case-control studies clearly indicates "healthy volunteer bias" as we point out in our paper.²

The lack of effect modification by linoleic acid found in the BMES data is interesting and possibly not surprising. We found a complex U-shaped interaction between dietary intake and the risk of AMD and the decision as to where cut points are taken will strongly influence the outcome (fig 1). It would be more informative if Mitchell presented his data either with the same cut points we had used, or presented his data in a continuous form.

Nevertheless, these two studies confirm the lack of evidence to support recommendations for a specific increase in dietary intake of lutein and zeaxanthin to protect against macular degeneration. At the same time of course no one would encourage people to deviate from a normal healthy diet including fresh fruit and vegetables.¹

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BOOK REVIEWS

The Video Atlas Of Eye Surgery—Phacoemulsification (Part 1)

B C Little, Aylward B, Packer M, *et al*. London: DVD \$405, 2006. ISBN 19-053-1201-6

Phacoemulsification 1 — Basic Techniques is the first in a series of DVDs forming the complete *Video Atlas of Eye Surgery*. The atlas will consist of five sections: phacoemulsification, vitreoretinal, glaucoma, refractive and orbital, lacrimal and lids. Each section is planned to have three subsections, concentrating on (1) basic techniques, (2) challenging cases, and (3) complications. The authors are a well respected international group of experienced ophthalmologists. They aim to provide a comprehensive and structured surgical training programme based on their experience of the topics presented. Their charity, The Eye Movies Foundation (www.eyemovies.org) works closely with Vision 2020 and contributes profits from this atlas as well as supporting ophthalmology training in the developing world. They collaborate with an

audiovisual company (www.eyemovies.co.uk) to produce an interactive video suite that is used throughout the series of DVDs. These are all PC and Mac compatible and will run on most modern systems. They will not, however, run in stand alone DVD players. The movies are accessed through a custom built interactive application and this has been well conceived. Navigation is simple and sections of videos can be digitally spliced and attached to a "Learning Pad" and even exported for inclusion in personal lectures or teaching sessions. This then is the appetiser for the forthcoming series.

Phacoemulsification 1 — Basic Techniques is presented as a single DVD. It has been divided into 10 sections with multiple subsections. All of these can be directly accessed through the menu on the main screen. The sections include: preparation, local anaesthesia, incisions, capsulorhexis, hydro manoeuvres, nucleus disassembly, epinucleus removal, irrigation and aspiration, IOL insertion, finishing off. Each section commences with basic principles and common procedures and where appropriate, moves on to more complex techniques. Thus, for example, the "nucleus disassembly" section includes videos on the classic "divide and conquer" technique as well as more advanced techniques such as "stop and chop," "phaco chop," and "chip and flip." It also goes on to mention "bimanual phaco techniques." There are 35 videos in this DVD lasting a total of 3 hours and 27 minutes. The videos are clear and concise and as expected are of superb quality, with bold and succinct narration. This theme is evident in all sections of the DVD and attention to detail is apparent throughout. The authors admirably serve up their collective experience in the field of phacoemulsification and must be congratulated for the time and effort put into this project. This DVD will serve as an excellent foundation for all trainee cataract surgeons. It will also provide sufficient tips and tricks for it to be of interest to the experienced surgeon.

As far as I can see, the only prohibitive feature of this DVD is its price tag. At over \$400, it is likely only to attract institutional purchasing. That said, it is a must have for any unit with trainee surgeons, and my opinion is that it should be evaluated by the Royal College of Ophthalmologists for inclusion in their training curriculum. I am thoroughly impressed by this product.

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The Video Atlas Of Eye Surgery—Vitreoretinal (Part 1)

B C Little, Aylward B, Packer M, *et al*. London: DVD \$405, 2006. ISBN 19-053-1200-8

Vitreoretinal 1 — Basic Techniques is the second in the series of this video based *Video Atlas of Eye Surgery*. The presentation is similar to the *Phacoemulsification 1 — Basic Techniques*. It is supplied on a single DVD, being PC or Mac compatible. The standard *Video Atlas* interface is used with chapters being presented on the right hand side of the main screen. These are easily collapsible or expanded to reveal the subsections and each video is, therefore,