

grew *Corynebacterium pseudotuberculosis*, which was sensitive to penicillin and vancomycin but resistant to erythromycin. One week of systemic ampicillin and cloxacillin together with 4 weeks of topical penicillin and vancomycin were prescribed. The conjunctival wound healed without sequelae and the retina remained attached. Upon inquiry, he did not have any history of trauma or gross contamination over the ocular surface. There was no recent travel history within 6 months from buckle exposure. He had constant contact with animals, as a dog was kept as a pet at home.

Comment

A hydrogel episcleral implant is the most resistant material to be infected in buckling surgery.² This peculiar clinical and bacteriological pattern may be related to the intricate physiochemical and biocompatibility characteristics of hydrogel. The low infective incidence of hydrogel implant was believed to be because of the lack of dead spaces and probable antibiotic absorption and depot effect.³ However, observations related to the fragility, swelling, and fragmentation of the hydrogel material with time were made since the first report in 1997 and the dead spaces created could possibly contribute to delayed episcleral implant infection years after surgery.^{2-4,6}

Corynebacterium pseudotuberculosis is a veteran infection and throughout the literature only 25 cases have been reported in humans and 22 of them have been reviewed.⁷ Exposure is usually occupational especially with a history of contact with sheep. The sheep farming industries within New Zealand and Australia are particularly involved. Infected humans generally presented with lymphadenitis, abscess, and constitutional symptoms.

Animal acquired infection was deemed as the most probable source of infection in our patient since he had a contact history with domestic animals, but otherwise no gross ocular soiling or contaminations was noted. Just like other human infection, the presentation of scleral buckling infection is closely related to the virulence and infective dose of the offending organisms. Our case may represent the first human ocular *Corynebacterium pseudotuberculosis* infection involving a scleral buckle after retinal reattachment operation.

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doi: 10.1136/bjo.2004.051698

Accepted for publication 1 July 2004

Financial support: Nil.

Financial interest: Nil.

References

- 1 Smiddy WE, Miller D, Flynn HW. Scleral buckle removal following retinal reattachment surgery: clinical and microbiologic aspects. *Ophthalmic Surg* 1993;**24**:440-5.
- 2 Roldan-Pallares M, Sanz JLC, Susi SA, et al. Long-term complications of silicone and hydrogel

explants in retinal reattachment surgery. *Arch Ophthalmol* 1999;**117**:197-201.

- 3 Tolentino FI, Lahav M, Refojo MF, et al. Hydrophilic acrylate scleral buckling implant in rabbits: long-term clinicopathologic observations. *Retina* 1983;**3**:50-8.
- 4 Holland SP, Pulido JS, Miller D, et al. Biofilm and scleral buckle-associated infections: a mechanism for persistence. *Ophthalmology* 1991;**98**:933-8.
- 5 Hwang KI, Lim JI. Hydrogel explant fragmentation 10 years after scleral buckling surgery. *Arch Ophthalmol* 1997;**115**:1205-6.
- 6 Asaria RHY, Downie JA, McLaughlin-Borlace L, et al. Biofilm on scleral explants with and without clinical infection. *Retina* 1999;**19**:447-50.
- 7 Peel MM, Palmer GC, Stacopole AM, et al. Human lymphadenitis due to *Corynebacterium pseudotuberculosis*: report of ten cases from Australia and review. *Clin Infect Dis* 1997;**24**:185-91.

A deficit in visits to the optometrist by preschool age children: implications for vision screening

Vision screening in children is aimed primarily at detecting non-strabismic amblyopia (other forms of vision defect are generally evident to parents). Such non-strabismic amblyopia occurs mostly as a result of uncorrected refractive errors.^{1,2} In the December 2003 report by the Child Health Sub-group³ it was recommended that all 4-5 year olds should receive vision screening. The Health For All Children 4 (HFAC4, 2003) "Hall Report"⁴ and the Children's Eye Health Working Party guidelines⁵ similarly suggest vision screening should be undertaken in all 4-5 year olds. This advice is in accord with the results of the first randomised controlled trial of treatment for amblyopia,² which found that treatment of moderate amblyopia (acuity 6/36-6/18) in

preschool aged children was effective. However, currently the coverage of vision screening is patchy, and numbers of specialist screening personnel may be insufficient to meet demand if the recommendation to screen all 4-5 year olds were to be implemented.⁶ In districts where vision screening is not carried out, optometrists might act as an important safety net by providing an additional route for referral of non-strabismic amblyopes.

Methods

As part of an investigation into the genetics of myopia,⁷ we investigated the age distribution of individuals attending for a sight test at 19 optometry practices in northern England during the period January 2000-December 2001. For subjects attending more than once, only the most recent visit was recorded. Of the 90 884 attendees, age was known for 90 750. None of the optometry practices operated in a manner that would be expected to discourage the attendance of children. The age distribution of this optometric cohort was compared with data from the census of England and Wales, conducted in 2000.

Results

Figure 1 shows the age distribution of the optometric cohort compared with that of the year 2000 census. Although the optometry practices were not selected according to defined epidemiological sampling criteria, the high similarity in the age distribution of the two datasets after the age of 10 suggests the optometry attendees are generally representative of the UK population. However, there was a clear deficit in visits to optometrists in the preschool age group, which was highly significant ($\chi^2 = 4186.4$, $df = 1$;

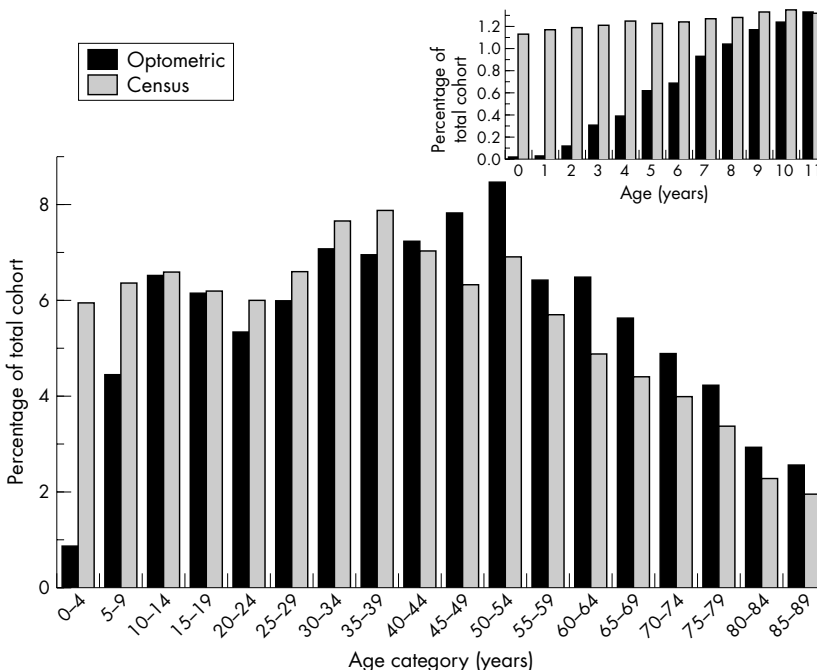


Figure 1 Age distribution of subjects visiting optometric practices (n = 90 750) and in the 2000 population census for England and Wales (n = 52 041 916). Note the deficit in numbers of children under the age of 10 years (see inset figure for detail), and the increased attendance of patients >45 years old coinciding with the onset of presbyopia.

$p < 0.0001$). Attendance to optometrists appeared to increase linearly until about age 11 when it reached adult levels (fig 1, inset). Our analysis suggests that only ~7% of children aged 0–5 years visit an optometrist (1.48% of visits in the optometric cohort were for infants aged 0–5 years, and there were 16.6 million sight tests carried out in Great Britain in total,⁸ in the year 2000, suggesting 246 000 tests on the 3.7 million infants in this age group). Because infants in whom a refractive error has been detected are likely to visit their optometrist each subsequent year, this figure must be an overestimate of the proportion attending for the first time—that is, in a screening context.

Comment

The fact that a visit to the optometrist is such an exception to the rule at this age underlines the importance of vision screening programmes, and suggests that every effort should be made to implement a comprehensive system of screening at age 4–5 in order to detect children likely to benefit from early treatment for amblyopia. However, where such programmes are not in place, we suggest that encouraging children to visit an optometrist should help in the early referral of non-strabismic amblyopes.

Acknowledgements

We are grateful to the staff of Conlons Opticians Ltd for access to anonymised patient record information. This work was supported by grants from the National Eye Research Centre (SCIAD015) and the Sir Jules Thorn Charitable Trust (RSC47).

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doi: 10.1136/bjo.2004.052027

Accepted for publication 8 July 2004

References

- Reeves BC. Taxonomy and epidemiology of amblyopia. In: Fielder AR, ed. *Amblyopia: a multidisciplinary approach*. Oxford: Butterworth-Heinemann, 2002:68–80.
- Clarke MP, Wright CM, Hrisos S, et al. Randomised controlled trial of treatment of unilateral visual impairment detected at preschool vision screening. *BMJ* 2003;**327**:1251.
- Child Health Sub-Group Report: Vision defects. 2003 (www.nelh.nhs.uk/screening/child_pps/vision_chsgr.html).
- Hall DMB, Elliman D. Screening for vision defects. *Health for all children*. Oxford: Oxford University Press, 2003:230–44.
- Children's Eye Health Working Party. *Guidelines for children's eye care*. 2002.
- National Screening Committee. Vision Workshop of the Child Health Screening Sub-Group, 2002.
- Farbrother JE, Kirov G, Owen MJ, et al. Family aggregation of high myopia: estimation of the sibling recurrence risk ratio. *Invest Ophthalmol Vis Sci* 2004;**45**:2873–8.
- Office for National Statistics. Sight tests volume and workforce survey (figure for combined private and NHS sight tests).

"Only rarely seen in dreams"—visual experiences during cataract surgery

Cataract surgery is the most commonly performed elective surgery in many countries including the United Kingdom.¹ With the majority of procedures performed under local anaesthesia, it is important for surgeons to recognise if patients are indeed visually aware of their environment. Understanding their experience would be a step forward in providing the safest and the most effective ophthalmic care to cataract patients.

Clinical significance of patients' visual experience lies in the fact that a large number of patients are frightened by their experience, which potentially leads to a number of problems.^{2,3} This could range from poor cooperation during surgery to a sympathetic surge with undesirable adverse effects of hypertension, tachycardia, hyperventilation, and acute panic attack.

Since the visual disturbances during cataract surgery can cause fear and anxiety and adversely affect patient satisfaction, any measure that could reduce its negative impact would contribute to making the operation safer and more bearable.

Visual experiences during cataract surgery have not been discussed in any major ophthalmic textbooks and have not been well studied until recently.^{2–6}

It is commonly expected by the majority of ophthalmologists that patients are not able to perceive much with the eye being operated on during surgery. Even the patient information leaflet published by the Royal College of Ophthalmologists, London, states, "you will not be able to see what is happening, but will be aware of a bright light."¹ This advice, unfortunately, may not be accurate in a sizeable proportion of patients undergoing cataract surgery.⁷

A number of artists have expressed their experience during cataract surgery previously.^{5,8} Two of our patients also wrote back describing their visual experiences. Both underwent uneventful cataract surgery by phacoemulsification and intraocular lens implantation in our unit. One was a professional artist and the other a local poet. The artist sent us an elaborate drawing resembling a "colourful monkey" which portrayed his visual experience (fig 1). The poet sent us a poem, inspired by his visual perception (fig 2). His words clearly reflect the drawing. Taken together the drawing and the poem can in fact provide a tangible insight into how patients may visually experience cataract surgery under local anaesthetic.

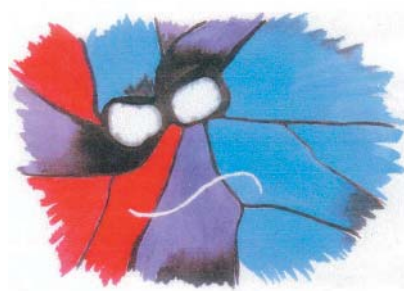


Figure 1 Artist's impression of his visual experiences during cataract surgery.

Wondrous light from laser beams
To show such strong dramatic scenes
Only rarely seen dreams
This helps the eye to see

Bright and beautiful coils of light
Crystal clear to heal the sight
Soft and warm and glowing bright
Fascinating mystery

Subtle shades of pink and blue
Smoky white and yellow too
Will these show the same for you
As they did for me?

Our thanks to those who show the light
Their skills and loving care delight
And much improve our failing sight
A wondrous place to be

Figure 2 Poem inspired by visual experiences during cataract surgery.

This documentation of visual experiences during cataract surgery could prove helpful to counsel patients on what to expect during the procedure. An explanation of possible visual experiences during local anaesthesia may relieve patient anxiety and should be included in patient information leaflets regarding cataract surgery. This could provide a useful tool to offer some reassurance to the anxious patients about to undergo the procedure. Patient counselling in this way may increase patient comfort and cooperation during the entire procedure.

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doi: 10.1136/bjo.2004.052811

Accepted for publication 6 July 2004

References

- Royal College of Ophthalmologists. *Cataract surgery guidelines*. London: Royal College of Ophthalmologists, 2001.
- Au Eong KG, Lim TH, Lee HM, et al. Subjective visual experience during phacoemulsification and intraocular lens implantation using retrobulbar anaesthesia. *J Cataract Refract Surg* 2000;**26**:842–6.
- Au Eong KG, Low CH, Heng WJ, et al. Subjective visual experience during phacoemulsification and intraocular lens implantation under topical anaesthesia. *Ophthalmology* 2000;**107**:248–50.
- Au Eong KG, Lee HM, Lim ATH, et al. Subjective visual experience during extracapsular cataract extraction and intraocular lens implantation under retrobulbar anaesthesia. *Eye* 1999;**13**:325–8.
- Murdach IE, Sze P. Visual experience during cataract surgery. *Eye* 1994;**8**:666–7.
- Newman DK. Visual experience during phacoemulsification cataract surgery under topical anaesthesia. *Br J Ophthalmol* 2000;**84**:13–15.