

Delivery of Eye Care to the Elderly: Practical Considerations

Richard Wormald
MSc FRCS FRCOphth

*Senior Lecturer and
Honorary Consultant
Institute of Ophthalmology
University College London
Glaxo Department of Epidemiology
Moorfields Eye Hospital
London EC1V 2PD, UK*

Introduction

The incidence of visual impairment greatly increases with age because most of the commonest blinding conditions occur in older age. Cataract is, of course, the main problem but glaucoma, diabetic retinopathy and macular degeneration are also important. Studies which examine the prevalence of visual impairment according to its causes have been done in both developed and less economically developed countries. They invariably find much unmet need in elderly population samples, in terms of avoidable or treatable conditions. In fact, elderly people often do not express the need to have anything done about their poor eyesight. A memorable example of this occurred during a home visit in a survey we carried out in inner London. The elderly couple were housebound. The husband was glad of our visit because he said his wife's eyes were very bad. We did indeed find this to be so but were surprised to find that he was worse – apparently unaware how poor his eyesight had become. Not surprisingly, cataract was the cause.

In many parts of the developing world, a similar situation exists. Areas where the prevalence of blinding cataract is high do not seem to have an overwhelming demand for surgical services. In Aravind Eye Hospital, South India, research has investigated what needs to be done to increase demand and reduce the backlog of avoidable blindness. There, and in Bangladesh, patients who have already had surgery (aphakic motivators) have been employed to increase the demand for cataract surgery, with some success. At the same time qualitative research has been carried out to discover the reasons why less than half the treatable blind come forward for surgery. The reasons will vary from person to person and from place to place but there are common themes shared by the elderly visually impaired across the world. For a

prevention of blindness programme to have its desired impact, these issues must be understood and dealt with.

Expectation

Elderly people are 'programmed' to anticipate a reduction of physical strength, agility and sensory awareness, which results in the gradual loss of their dominant role in the family. They accept that they will become, ultimately, totally dependent. Grandparents, while still able to function, provide an important indirect economic role by minding the children while the parents work. When the sight fails though, they become more dependent than the children and roles are reversed. But because this natural decay has been observed for so long, there is a resistance to accept that things might be otherwise.

Awareness and Demand

Because ophthalmic services are often so poorly accessible, rural communities will have little or no up to date information about what can be done for failing sight in elderly people. Knowledge will come from their own experiences of their own parents' loss of function in old age and (which is perhaps worse) from the fact that nothing was done about it a generation before. There is a natural suspicion of what the modern city folk might offer, because there are major social and cultural differences between urban and rural communities. In the Aravind research, it was clear that rumours of poor outcome spread much faster and further than those of success – a result of the natural suspicion that rural communities have of the distant urban culture. But the same kind of phenomena were noticed in inner London; stories of a particular person who failed to benefit from surgery dominate reports of a miraculous cure which may have happened to many more. Elderly people need a conviction that they too can benefit. Such conviction may be easily lost when so many other troubles – aches and pains, incontinence, deafness – are not amenable to treatment and are always put down to 'old age'.

When there is no prior expectation of benefit, there will be no demand. Imposing the expectation from 'above' does not work. The offer of an operation will result in fear rather than hope and the option of leaving well alone and struggling on will usually be preferred.



Elderly people may be anxious about requesting help from the eye care worker

Photo: Murray McGavin

Creating Demand

Market principles apply. There must be a product which people want. To create such a demand, the product must be of high quality and successful, as well as accessible and affordable. Much thought has been given to these questions especially by the Aravind group. A key issue is the appropriate selection of patients for cataract surgery. Poor selection means many patients undergo surgery without the prospect of significant visual recovery because underlying pathology complicates the surgery, or simply reveals another untreatable problem. Therefore, many people returning to their village after surgery will spread the word that no good came of all the stress and fear involved in undergoing the operation, and the campaign will fail. It is not difficult to anticipate a good outcome from cataract surgery if a little extra care is taken in the preoperative assessment of the patient. But in large screening camps, it might be easy to overlook subtle signs which warn of poor outcome – the unreacting pupil or poor projection of light to a moving source. In the camp, the pressure is there to do as many procedures as possible. The emphasis is on quantity not quality; the outcome is measured by the number of operations performed rather than the number of persons for whom sight was restored.

Quantity and Quality

A greater emphasis on the quality of surgical outcomes will increase demand. This means that outcomes must be measured and recorded. Use of intraocular lenses in cataract surgery will also improve demand so long as the appropriate surgical skills and technology are available. Posterior chamber lens implantation after extracapsular surgery is the ideal, but anterior chamber lenses after intracapsular surgery may offer a safe interim arrangement.

There should, of course, be a suitable balance between quality and quantity. An excessive emphasis on quality will reduce the number of procedures carried out. Spending more time, resources and effort on fewer people may mean that there is less overall benefit to the population. In fact, quality and quantity can improve together as long as efficiency and accuracy are maintained. Pushing too hard for quantity will inevitably degrade quality and vice versa.

Compliance

Successful treatment of chronic blinding eye conditions such as glaucoma or diabetic retinopathy depends on the compliance of the patient. In both cases treatment is required before there is an obvious problem for the patient. This means that the doctor must carefully explain the purpose of the treatment in terms which the patient can understand. It is all too easy for the doctor to blame the patient for failure to comply but it is the doctor's responsibility to ensure that the chosen treatment is acceptable and its purpose fully understood. Elderly patients from rural communities may have considerable difficulty in accepting the word of a strange doctor that, unless something is done, worse will follow. Many of the patients attending the glaucoma clinic in Queen Elizabeth's Hospital, Bridgetown, Barbados preferred to 'put their trust in the Lord' than to do as the white doctor ordered and use pilocarpine four times a day.

Thus medical treatment of glaucoma is so often unsuccessful. Patients may be

happy to comply with a 'course' of treatment for a definite time, but long term treatment is not an attractive proposition, especially when the patient is unaware of benefit. Given that facilities for follow up are often so poor, one time surgical intervention is often the only real option. But every effort must be made to ensure that the patient fully understands the purpose of the operation before surgery, and that there is no expectation of seeing better after surgery.

Although treatment at present is very rarely effective in preventing sight loss from age-related macular degeneration, much can be done to rehabilitate the affected person. Again, for this to work, the patient must be willing and motivated to benefit from the support offered. An elderly person who has lost sight is often, not surprisingly, depressed. This must be overcome if the rehabilitation is to be effective. In dealing with this type of problem, the doctor must understand the impact of loss of sight. Much of this is similar to the stages of bereavement in the loss of a loved one: denial, anger, profound sorrow and self pity, despair and hopelessness. This was well described in a recent article by Fitzgerald and Parkes.¹

The Elderly Person's Perspective

If we wish to be successful in improving the quality of life of our ageing populations, we must be careful to view things from their perspective. Elderly people are usually cautious and conservative; they tend to distrust new and unfamiliar things. They are aware of their vulnerability and



Dr Diana discussing post-operative care with a patient in Bangladesh

Photo: Murray McGavin

while they may have been prepared to take risks when they were younger, they do not want to let anyone take advantage of them when they have so little to fall back on. They have survived a long and hard life and believe they know much about the world. Usually they will be happier to let another undergo an operation and wait and see the outcome before making a decision about themselves.

We must respect and understand this attitude and not be surprised that it takes time and effort to gain acceptance for something we implicitly believe in.

Reference

- 1 Fitzgerald R G, Parkes C M. Blindness and loss of other sensory and cognitive functions. *BMJ* 1998; **316**:1160-3

☆ ☆ ☆

Abstract

The age distribution of primary open angle glaucoma

Maurice W Tuck BSc (Econ)
Ronald P Crick FRCS FRCOphth

Prevalence data for primary open angle glaucoma (POAG), taken from eight population surveys,* was smoothed by curve-fitting to derive composite estimates with respect to quinquennial age groups from 40-44 to 85-89 years. These were applied to national population figures to provide a distribution of cases with respect to age.

Estimated prevalence for age 40-89 years in mainly white Caucasian people was 1.2%, rising from 0.2% for those in their 40s to 4.3% for those in their 80s. Of the total cases, 7% were less than 55 years old, 44% were aged 55-74 years, and 49% were older. 'Implied incidence' was estimated from the prevalence results, being 0.11% per year in people aged 55 to 74 years.

The analysis applied to relatively narrow definitions of POAG. If 'probable' cases and also 'ocular hypertensives requiring treatment' (of relevance for glaucoma screening) were included, the prevalence would be almost twice as high. Also, a larger proportion of potential cases for a screen would be less than 55 years old, partly because the average age of incident (i.e., newly developed) cases is less than that of prevalent (i.e., all existing) cases.

Published courtesy of:

Ophthalmic Epidemiology 1998; **5**: 173-83.

* **Ferndale, Wales (1966); Framingham, USA (1977); Baltimore, USA (1991); Beaver Dam, USA (1992); Roscommon, Eire (1993); Rotterdam, Netherlands (1994); Casteldaccia, Sicily (1995); Blue Mountains, Australia (1996).**

EPIDEMIOLOGY IN PRACTICE

We have not been able to publish the next article in the series in this issue of the Journal. We will continue the series with two articles in following issues. These will discuss **Screening** and **Qualitative Methods**. Editor