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A GLOBAL INITIATIVE FOR THE ELIMINATION OF AVOIDABLE BLINDNESS

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Spectacle aphakic correction for an 'only' eye in Uganda *Photo: Murray McGavin*

Despite considerable efforts in many developing countries, through national blindness prevention programmes, the global number of blind and visually disabled seems to be growing, mainly as an effect of population increase and ageing. Thus, the most recent (1997) projected estimate for world blindness points to some 45 million blind, and an additional 135 million visually disabled ('low vision'). About 80% of blindness is avoidable (preventable or curable), and nine out of 10 of the world's blind live in a developing country.

Given this alarming situation, with a potential doubling of the world's blindness burden by 2020, a series of consultations were held during 1996 and 1997, between the WHO Programme and the Task Force to the Partnership Committee of collaborating Non-Governmental Organisations, with a view to developing a common agenda for global action against avoidable blindness; the expected result would be a strengthened and accelerated movement for blindness prevention, particularly in the developing world.

The Global Initiative for the Elimination of Avoidable Blindness, as a result of the consultations held, is focusing on a few priority disorders, and on what action needs to be taken from now to the year 2020, in terms of (i) disease control; (ii) human resource development; and (iii) infrastructure strengthening and appropriate technology development for eye care delivery.

Disease Control

Cataract stands out as the first priority amongst the major causes of blindness, with an estimated present backlog of 16-20 million unoperated cases. The number of cataract operations/million population/per year is a useful measure of the delivery of eye care in different settings; this demonstrates great differences, as follows:

Operations/Million Population/Per Year	
Africa:	approximately 200
Latin America:	500-1500
India:	approximately 2000
Europe:	approximately 3000
USA:	approximately 5000

Thus, there is a need to increase drastically the number of cataract surgeries in the developing world; the present estimate is that approximately 7 million operations were performed globally in 1995, and there will be a need to perform 12 million surgeries in the year 2000, to prevent a further growth of the backlog. Similarly, by the year 2010, 20 million operations should be done, and in 2020, an impressive 32 million cataract operations will be needed. At the same time as numbers go up, there should also be a change in technology with intraocular lens implantation as a common standard, and the proper follow-up of quality of surgery. This will call for better manage-

In This Issue....

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ment and monitoring of services, including patient satisfaction.

Trachoma is still the most common cause of preventable blindness in the world, with some 5.6 million blind, and around 146 million cases of active disease in need of treatment. A suitable strategy, referred to as 'SAFE' (Surgery, Antibiotics, Facial Cleanliness and Environmental Hygiene) has been defined, and is being increasingly applied in endemic countries. A recently established (1997) WHO Alliance for the Global Elimination of Trachoma will facilitate collaboration with all interested parties, including 46 endemic countries with blinding trachoma. Actions envisaged under the Global Initiative include the provision of around 5 million trichiasis operations, from the year 2000 to 2010, and treating at least 60 million people with active disease in the same period. By the year 2020, global elimination of blindness due to trachoma should be achieved.

Onchocerciasis will be brought under control by the year 2010 if ongoing operations in endemic countries are successfully completed. The recent development of community-directed treatment with annual doses of ivermectin will make it possible to eliminate this burden of blinding disease from the countries affected in Africa and Latin America.

Childhood blindness is caused mainly by vitamin A deficiency, measles, conjunctivitis in the newborn, congenital cataract and retinopathy of prematurity. There is rapid progress in eliminating xerophthalmia and measles, as part of 'child survival' initiatives, supported by several UN and other organisations. However, much more work is needed to detect, at an early stage, the other causes of childhood blindness and to manage them optimally.

Refractive errors and low vision constitute another priority in terms of visual disability; there is an enormous need globally for spectacles and low vision devices. The Global Initiative will focus on refractive services as part of primary health care and school services, and local low-cost production of glasses and optical devices will be promoted.

Human Resource Development

In the field of human resource development emphasis will be on the primary health care approach to blindness prevention. This implies continuing support for primary eye care training in countries. In addition, there will be strengthened efforts to train more ophthalmologists, from the present situation of one ophthalmologist per 500,000 people in Africa, to achieve 1:250,000 by the year 2020. The corresponding figures for Asia would be from 1:200,000 today, to 1:50,000 in 2020. Similarly, increased training of ophthalmic medical assistants and ophthalmic nurses should result in a ratio of 1:100,000 or 1:50,000 in the year 2020, as compared to 1:400,000 today in Africa and 1:200,000 in Asia respectively. It is also envisaged that there should be 100% coverage of training in basic eye care in medical schools by the year 2020. Other categories of staff to be trained under the Global Initiative include refractionists, managers for national/regional programmes and for major clinics, and also equipment technicians.

Infrastructure and Appropriate Technology

Infrastructure and appropriate technology development is the third essential component of the Global Initiative. Standards for the availability of eye beds, refraction facilities, basic eye medicines, etc. will be applied to make sure that the availability, access, utilisation and coverage of basic eye care will be at least 90% to all populations in the year 2020.

With regard to appropriate technology development, emphasis will be put on the sustainable use of modern technology, making use of local production in developing countries whenever appropriate. The particular fields of interest concern instruments

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and consumables for cataract surgery, basic eye examinations, trichiasis surgery, glasses and other optical devices, as well as computers and other communications systems for effective management and co-ordination of work.

The Global Initiative is still in its early planning phase, but there is a clearly recognised need for a global awareness campaign, to sensitise decision-makers and health care providers as to the rationale and great benefits of blindness prevention. The future scenario of a doubling of world blindness by the year 2020, unless more preventive action is taken, is unacceptable from a humanitarian point of view, and would have far-reaching socio-economic and developmental consequences. This is why a strengthened partnership between all those working for blindness prevention is essential for optimal utilisation of resources available today and in the future.

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Editorial

Global Initiative for the Elimination of Avoidable Blindness

Future editions of the Journal of Community Eye Health will devote one page to the Global Initiative for the Elimination of Avoidable Blindness. This important initiative is introduced as our lead article by Dr Bjorn Thylefors, Director, Programme for the Prevention of Blindness and Deafness, World Health Organization (WHO PBD).

Discussions involving the WHO PBD and the Task Force of Non-Governmental Development Organisations has resulted in a document outlining objectives, strategies, indicators and targets until the year 2020 AD, with emphasis on disease control, human resource development and infrastructure and appropriate technology.

Cataract is the most common cause of blindness worldwide and we publish three reports from India, two on Cataract Surgical Coverage and one on Counselling for Cataract Surgery. India has pioneered much in the field of eye care programmes, particularly in the provision of high volume cataract surgical services. Since we have published a 4-page Indian Supplement (see back page) we have missed some of the excellent articles which have been circulated in India alone. This issue redresses that situation.

A significant challenge for cataract surgeons in developing countries is the creation of the necessary surgical environment and skills to facilitate intraocular lens (IOL) implant surgery. Allen Foster and Albrecht Hennig discuss the option of using anterior chamber IOLs as an alternative to the proven technique of posterior chamber IOL surgery. This report is based on ongoing studies at Lahan Eye Hospital in Nepal. We look forward to publishing the major findings of the 2-5 year study which should reach its conclusions in 1998.

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Cataract Surgery

CATARACT SURGICAL COVERAGE: An Indicator to Measure the Impact of Cataract Intervention Programmes

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Aim

To describe Cataract Surgical Coverage (CSC) as an indicator to measure the impact of cataract intervention programmes.

Methods and Materials

Cataract Surgical Coverage, both for 'eyes' as well as 'persons', was calculated from community based surveys conducted in 19 rural districts in the south-west and one urban district in the north-west of India.

Results

Cataract Surgical Coverage (VA<3/60) ranged from 42% to 68% (for persons) and from 22% to 45% (for eyes) in 19 districts of Karnataka State. The coverage for males was higher than for females. In Ahmedabad the coverage was high with 93% for persons and 83% for eyes.

Discussion

Together with prevalence data, Cataract Surgical Coverage can provide important information on the impact of cataract intervention programmes. Regular assessment of prevalence and coverage indicators through focused community surveys will reveal trends. Coverage indicators are also important as input data for mathematical models to predict future trends in cataract blindness.

Introduction

Cataract is a public health problem in many developing countries, including India. Traditionally, the cataract intervention programme is evaluated by the number of cataract operations performed per year. In India this has increased from 1.2 million in 1989 to 2.7 million operations in 1996.[1] However impressive this increase may be, the figure does not indicate the extent to which the problem of cataract blindness has been reduced.

Two indicators are used to measure impact. First, it can be measured by a change in prevalence of cataract blindness, obtained through community based surveys. Since blindness surveys are costly and lengthy exercises, these are not conducted regularly. In India, a national study was done in the period 1971-74 and a National Survey on Blindness in 1986-89. The variation in prevalence of blindness and visual impairment due to cataract over this period indicates the impact surgical services have had on the magnitude of the problem.

Advanced cataract, left eye, in Sri Lanka
Photo:Victoria Sheffield

Before cataract surgery in Somalia
Photo: Murray McGavin

The second indicator to measure impact is Cataract Surgical Coverage (CSC).[2,3] This community based parameter compares the proportion who have received surgery (aphakic) to the total, who still need or have had surgery (aphakic + operable cataract) in a certain area. It indicates to what extent the services have covered the needs. It measures the effectiveness of the cataract intervention programme in providing surgical services and, as such, it is an output indicator and does not measure the quality of cataract intervention.

This article presents Cataract Surgical Coverage data obtained through specially designed rapid assessments from two areas in India.

Methods and Materials

We have conducted a simple community based rapid assessment at district level in India, using a systematic random cluster sampling technique. These assessments focused on persons of 50 years and older only. The National Survey on Blindness, India, indicated that of all age-related cataract blindness, 95% occurs in the age group of 50 years and older. Using data obtained from persons of 50 years and older only may slightly underestimate the actual coverage.

The survey methodology and detailed results of the first study have been reported elsewhere.[4,5] In 1995, these rapid assessments were conducted in 19 districts of Karnataka State in the south west of India, covering a total of 21,950 persons, and in 1997 in the predominantly urban district of Ahmedabad in Gujarat, covering 1962 persons.[6] The main indicators collected through these rapid assessments are the prevalence of bilateral and unilateral blindness or (severe) visual impairment due to cataract and the prevalence of bilateral and unilateral aphakia. From these two statistics the Cataract Surgical Coverage (CSC) can be calculated.

After eye camp cataract surgery in India
Photo: Murray McGavin

Eligibility for cataract surgery also depends upon visual acuity and varies between institutions and surgeons. It may be better to use the term 'operable cataract' and define the level of visual acuity as follows:

- VA<3/60: cataract blind eye or patient
- VA<6/60: severely visually impaired operable cataract eye or patient
- VA<6/18: visually impaired operable cataract eye or patient

The Cataract Surgical Coverage can be measured in two ways, as shown in Figs. 1 and 2:

Fig. 1

$$\text{Cataract Surgical Coverage (persons) (VA)} = \frac{x + y}{x + y + z} \times 100$$

in which:

x = persons with unilateral (pseudo)aphakia and operable cataract in the other eye

y = persons with bilateral (pseudo)aphakia

z = persons with bilateral operable cataract

In the equation in Fig. 1, we include bilateral operable cataract which can be defined as either VA<3/60, VA<6/60 or VA<6/18, bilateral aphakia and unilateral aphakia with

Table 1: Cataract Surgical Coverage from Sample Data on Operable Cataract and Aphakia in 19 Districts in Karnataka (1995)

Category	Condition			VA<3/60	VA<6/60	VA<6/18
z	*No. persons with bilateral operable cataract*			*1,157*	*2,143*	*4,345*
y	*No. persons bilaterally (pseudo)aphakic*			*558*	*558*	*558*
x	*No. persons one eye aphakic + one eye operable cataract*			*755*	*877*	*988*
*b**	*No. operable cataract eyes**			*4,481*	*6,844*	*11,511*
*a***	*No. (pseudo)aphakic eyes***			*2,401*	*2,401*	*2,401*
%	*first eyes:*	*76.8%*	*(a-y)/a*			
%	*second eyes:*	*23.2%*	*y/a*			
	Cataract Surgical Coverage (eyes)		*a/(a+b)*	*34.9%*	*26.0%*	*17.3%*
	Cataract Surgical Coverage (persons)		*(x+y)/(x+y+z)*	*53.2%*	*40.1%*	*26.2%*

***b is defined as all eyes with cataract causing an acuity of less than 3/60, 6/60 or 6/18.**

****a is defined as all eyes which are aphakic or (pseudo)aphakic, regardless of acuity.**

Table 2: Prevalence of Bilateral Cataract Blindness and Cataract Surgical Coverage (VA<3/60) in Eyes and Persons of 50 Years and Older

District	Prevalence bilateral cataract blindness in persons 50+			Cataract surgical coverage in eyes of persons 50+			Cataract surgical coverage in persons 50+		
	males	females	persons	males	females	persons	males	females	persons
Bangalore-R	3.22%	5.59%	4.33%	36%	28%	32%	55%	43%	47%
Belgaum	2.61%	5.00%	3.79%	42%	39%	40%	65%	57%	60%
Bellary	4.77%	7.19%	6.00%	27%	27%	27%	42%	43%	43%
Bidar	2.69%	5.73%	4.17%	36%	28%	31%	65%	47%	52%
Bijapur	4.14%	8.85%	6.56%	39%	27%	31%	57%	47%	50%
Chickmagalur	1.48%	5.40%	3.37%	51%	35%	42%	81%	55%	67%
Chitradurga	3.94%	8.24%	5.97%	34%	26%	29%	54%	41%	46%
Dak. Kannad	1.27%	7.65%	4.59%	50%	27%	34%	80%	34%	47%
Dharwad	3.77%	6.53%	5.15%	42%	38%	40%	64%	55%	58%
Gulbarga	3.71%	6.99%	5.37%	48%	26%	33%	64%	44%	50%
Hassan	2.10%	3.40%	2.74%	51%	40%	44%	66%	64%	64%
Kodagu	1.88%	1.25%	1.58%	40%	47%	45%	57%	75%	68%
Kolar	5.10%	6.36%	5.70%	24%	20%	22%	47%	38%	42%
Mandya	3.40%	6.00%	4.65%	47%	44%	45%	66%	58%	61%
Mysore	2.00%	6.35%	4.05%	46%	31%	36%	70%	47%	55%
Raichur	4.35%	6.72%	5.58%	24%	29%	28%	46%	50%	49%
Shimoga	3.12%	5.24%	4.12%	44%	35%	39%	66%	56%	60%
Tumkur	5.70%	9.01%	7.24%	44%	33%	37%	56%	49%	51%
Uttar Kannad	3.42%	4.60%	4.00%	41%	44%	43%	50%	60%	57%
Karnataka	3.39%	6.51%	4.93%	40%	32%	35%	60%	49%	53%

an operable cataract in the other eye. (Persons with unilateral aphakia, in whom the other eye does not have an operable cataract, are excluded from the equation. Such persons do not have bilateral blindness or (severe) visual impairment due to cataract and are therefore not included in the denominator.)

In most cases, it is not possible to assess in retrospect whether patients with (pseudo)aphakia were actually blind (VA<3/60), severely visually impaired (VA<6/60) or visually impaired at the time of surgery. For that reason it is important to calculate the cataract surgical coverage for all three levels of visual acuity.

The equation in Fig. 2 gives an indication of the proportion of eyes with operable cataract that have had surgery in the community at a given point in time.

Fig. 2.
Cataract Surgical Coverage (eyes) (VA) = $\frac{a}{a+b} \times 100$
in which:
a = (pseudo)aphakic eyes
b = eyes with operable cataract

The Cataract Surgical Coverage can be calculated directly from the sample data, or from the projected district data, after adjusting the sample data for age and sex. Software has been developed for these rapid assessments. It gives CSC(persons) and CSC(eyes) for VA<3/60, VA<6/60 or VA<6/18, for total population and males/females separately.

Results

Data from the rapid assessments on the prevalence of cataract blindness and Cataract Surgical Coverage from Karnataka State are given in Table 1 and Table 2.

The number of persons with bilateral operable cataract increases from 1,157 to 3,345, depending upon the level of visual acuity, while the number of persons with bilateral aphakia remains the same. Similarly, the number of operable cataract eyes increases from 4,481 for VA<3/60 to 11,511 for VA<6/18, while the number of aphakic eyes remains the same.

At VA<3/60, 34.9% of all cataract blind eyes and 53.2% of all bilateral cataract blind persons have been operated upon, assuming that only people with cataract and a VA<3/60 were eligible. As expected, the coverage indicators for VA<6/60 and VA<6/18 are lower: 40.1% and 26.2% for persons and 26% and 17.3% for eyes

Table 3: Cataract Surgical Coverage from Sample Data on Operable Cataract and Aphakia in Ahmedabad District (1997)

Category	Condition			VA<3/60	VA<6/60	VA<6/18
z	*No. persons with bilateral operable cataract*			*26*	*69*	*206*
y	*No. persons bilaterally (pseudo)aphakic*			*292*	*292*	*292*
x	*No. persons one eye aphakic + one eye operable cataract*			*47*	*83*	*139*
*b**	*No. operable cataract eyes**			*158*	*310*	*689*
*a***	*No. (pseudo)aphakic eyes***			*776*	*776*	*776*
%	*first eyes*	*62.4%*	*(a-y)/a*			
%	*second eyes:*	*37.6%*	*y/a*			
	Cataract Surgical Coverage (eyes)		*a/(a+b)*	*83.1%*	*71.5%*	*53.0%*
	Cataract Surgical Coverage (persons)		*(x+y)/(x+y+z)*	*92.9%*	*84.5%*	*76.7%*

b is defined as all eyes with cataract causing an acuity of less than 3/60, 6/60 or 6/18.
****a is defined as all eyes which are aphakic or (pseudo) aphakic, regardless of acuity.***

Eye camp surgery in India: post-operative inpatients *Photo: Murray McGavin*

respectively. Nearly 77% of all operations were performed in the first eye, and 23% in the second eye.

Table 2 gives the prevalence of bilateral cataract blindness, CSC(eyes) and CSC(persons) for each district and also by gender. One might expect that a district with a high surgical coverage would have a low prevalence. However, that is not always the case. Mandya District, for example, has a prevalence rate three times higher than Kodagu District, while the coverage indicators for persons and eyes are nearly the same. It can also be seen, from Table 2, that the prevalence of cataract blindness for females is nearly twice as high as for males. The differences in coverage are less marked .

Table 3 gives the results of the rapid assessment in Ahmedabad. Here the situation is different. There are many more persons with bilateral (pseudo)aphakia than with bilateral blindness, or severe visual impairment due to cataract. The number of (pseudo)aphakic eyes is 5 times higher than the number of cataract blind eyes. For operable cataract eyes (VA<6/60) it is more than twice as high and for VA<6/18 there are slightly more aphakic eyes than eyes with operable cataract. The Cataract Surgical Coverage is 92.9% for blind persons (VA<3/60) and 83.1% for eyes, assuming that only people with cataract and a VA<3/60 had been operated on. The Coverage of <6/60 is 84.5% for persons and 71.5% for eyes.

The coverage of visually impaired cataract (VA<6/18) is higher in Ahmedabad than in Karnataka, indicating that surgical intervention is being undertaken at an early stage of visual loss. More second eyes (37.6%) have been operated in Ahmedabad than Karnataka.

The problem of cataract blindness seems to be under control in Ahmedabad and the capacity to provide surgical services is sufficient to cater for the needs of most people in the district. Nevertheless, we still found 26 persons who were bilaterally blind (VA<3/60) from cataract in the sample. These patients were asked in the survey why they had not been operated on so far. Six patients mentioned 'medical contra-indications' and seven 'no felt need'; the remaining patients a variety of other reasons. This may be the 'hard core' of the cataract problem - the patients who cannot or do not want to have surgery.

Discussion

Prevalence of cataract blindness along with Cataract Surgical Coverage can give important information about the impact of a cataract intervention programme. The surgical coverage for persons indicates to which extent people, disabled by bilateral operable cataract, had surgery in one or both eyes. It relates directly to the prevalence of bilateral cataract blindness.

Cataract surgical coverage for eyes also includes people with operable cataract in one eye and a normal other eye. It relates more to the total surgical workload for the ophthalmologists.

Both indicators only provide quantitative data. Visual outcome is not taken into account and can be calculated separately from the same data.

Indicators obtained through population based surveys are influenced by events over a previous period of several years. The effects of recent changes in strategy are likely to be diluted by effects from the period before the change in strategy. Prevalence and coverage data should be collected at regular intervals, say every 3-5 years, to reveal trends. Rapid assessments, conducted by local staff, using simple, standardised survey methodology and software for data analysis, can be undertaken.

As can be seen from Karnataka, usually a lower prevalence of cataract blindness is linked with a higher coverage. The factors that determine this relation are the proportion of first eyes being operated on and the proportion of operations on eyes not yet blind.

It is not always possible to assess in retrospect whether a person with one or two aphakic eyes was actually blind (VA<3/60), severely visually impaired (VA<6/60) or visually impaired (VA<6/18) at the time of surgery. The proportion of operations on non-cataract blind patients is difficult to assess. In Karnataka state, the results show that only 5% of all surgeries were with intraocular lens implantation.[5] Most cataract surgeries were done on patients or eyes with a VA<3/60 and hence, the cataract surgical coverage for this level will be fairly correct.

In Ahmedabad district, however, many more people with a VA better than 3/60 were also operated upon. In such situations, it will be more accurate to use the cataract surgical coverage at level <6/60 or even <6/18.

It is possible to assess the visual acuity of all (pseudo) aphakic eyes in the sample to assess outcome, and look at the reasons for failure. If patient records are available, the proportion of first eyes and second eyes can be calculated and this can give an impression of utilisation of resources.

By comparing pre-operative vision with post-operative vision the Success Rate and the Sight Restoration Rate can be calculated. This indicates the proportion of all cataract operations which change a blind person into a sighted person.[7] Such outcome indicators reveal the quality of cataract surgery and visual rehabilitation.

Cataract blindness is a dynamic entity, determined by demographic changes in the population, incidence of cataract blindness, and quality and quantity of the surgical services provided. These dynamics are difficult to capture in time bound static indicators. One should not look at coverage data in isolation but use them in combination with other parameters.

What is really needed is a mathematical simulation model that can capture these dynamics and can predict future trends in cataract blindness.[8] The indicators described above can assist in developing such a model.

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CATARACT SURGICAL COVERAGE IN KOLENCHERY, KERALA, INDIA

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Out of the 38 million blind, 8.9 million live in India and of these 5.12 million are due to cataract. This major cause of blindness can be overcome by cataract surgery. In the year April 1996 to March 1997, India carried out 2.7 million cataract surgeries, but this is still inadequate to clear the backlog.

In April 1995 we started a Community Eye Care Project (CECP). The project aims to give comprehensive eye care to a population of 500,000. The first two-year phase covered a population of 150,000. Trained field workers gather information on the eye problems in the community and refer them for treatment.

The project's aims are to identify the blind in the community, give curative treatment, if possible, and rehabilitate those who are incurably blind. All the people in the area are examined for eye diseases. This information is used to determine the prevalence of blindness, prevalence of cataract and the cataract surgical coverage in the area. The project also screens children under five years of age for signs of nutritional blindness.

Materials and Methods

A population of around 90,000 in an area of 190 sq. km. has been examined. The field staff were given training in basic eye care, which includes – vision recording, identifying common eye diseases, identifying cataracts, aphakia and pseudophakia. Field workers and community level volunteers were selected from the project area itself. They were also trained in imparting community based rehabilitation (CBR) to the incurably blind.

Field workers carry out house-to-house surveys of all the people in the area, identify the visually impaired and refer them to the hospital or to a local screening camp. The camp is organised in the area and an ophthalmologist goes there to see patients referred by the field workers. The field workers are given 'E' charts and cataract cards to record visual acuity and identify cataracts. A field supervisor oversees the work of the field workers. The visual status is assessed as per the WHO categories of visual impairment. Patients who have operable cataracts are referred to the base hospital for surgery. It is the responsibility of the field workers to motivate and bring these patients for surgery. The field staff conduct follow-up visits to those who are not willing to go for surgery and motivate them with the help of those who have had surgery.

Results

A total of 93,350 people have so far been screened, with a 96.2% examination rate. Absenteeism accounted for the non-examination of 3,590 people. There were 354 blind people of which 313 (88%) were due to cataract. The prevalence of blindness was 0.39% and cataract blindness 0.35% (<3/60). The prevalence of operable cataract (defined as a person with less than 6/60 in the better eye due to cataract) was 0.49%. The prevalence of aphakic patients (without intraocular lens implants - IOLs) was 0.48% and the prevalence of pseudophakic patients (with IOLs) was 0.21%. There were 441 patients with a best visual acuity of less than 6/60 due to cataract and 620 patients who had received cataract surgery, giving a cataract surgical coverage of 59%. Of the 620 patients who had received cataract surgery, 30% had an IOL. We performed 346 cataract surgeries from the target population of 150,000 last year, giving a cataract surgical rate of 2,300/million population/year.

Our observations in the eye screening camps conducted by our mobile unit show

Developing cataract

Photo: Murray McGavin

that at least 20% of those who attend have operable cataracts but less than 10% of them report for surgery at the base hospital. Lack of escort, fear of surgery, socio-economic reasons, adverse media reports of isolated failures in eye surgeries especially in eye camps, are some of the reasons reported for non-compliance. We surveyed 121 patients who were advised to have cataract surgery by our field workers. Only 35% of them underwent cataract surgery over a six-month follow-up period. The reasons for non-compliance were lack of escort (30%), economic reasons (20%), and 20% felt that surgery was not needed.

The trained field workers and community level volunteers are selected from the same community as the patients, which helps in better motivation of cataract patients. These field workers also detect common eye diseases and give community based rehabilitation, thus providing total eye care to the community.

There are many possible solutions to clearing the backlog of curable blind in India. Our community oriented approach could be one of them.

Kerala, despite being a state with total literacy and good health infrastructure, still has a problem of treatable blindness. We believe a community based programme is a good strategy for delivering eye care to the people.

Acknowledgement

We thank Christoffel Blindenmission, Germany, for the generous help given to us for this study.

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Table: Operative Cataract, Aphakia and Pseudophakia by Age in a Community Survey of 89,760 People

Age	Total No.	No. with Cataract <6/60-3/60	No. with Cataract <3/60	No. with Aphakia	No. with Pseudophakia
0 – 40	*62,598*	*8*	*7*	*2*	*1*
41 – 50	*10,790*	*8*	*5*	*2*	*17*
51 – 60	*6,747*	*21*	*85*	*92*	*42*
61 +	*9,625*	*91*	*216*	*325*	*129*
Total	**89,760**	**128 (0.14%)**	**313 (0.35%)**	**431 (0.48%)**	**189 (0.21%)**

The Role of Patient Counsellors in Increasing the Uptake of Cataract Surgeries and IOLs

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This article gives the experience of the eye hospital of the Vivekananda Mission Ashram, where we have found that patient counsellors make a major contribution to increasing the uptake of cataract services, particularly intraocular lens (IOL) surgery.

Patient counselling is an important part of medical or surgical management of a disease. Every patient should know about the nature of the disease and the benefits of the treatment suggested by the doctor. In industrialised countries this part of treatment is adequately managed but in developing countries patient counselling is very much neglected. The reason may be the larger volume of patients per doctor who finds it difficult to explain everything to the patient to take away anxieties and apprehensions. Patient counsellors are very useful in providing this service.

Selection

We have found it useful to select for counsellor training people who have been observed at work for at least six months. This gives the employer a chance to assess the worker's attitude towards patients and his or her interest in learning basic aspects of ophthalmology. Keeping these aspects in mind, ophthalmic nurses and field workers are good choices for the post of counsellors because they already have a basic knowledge of common eye problems and are exposed to the community to some extent. A less experienced person may also be found suitable for the job and can be trained in the hospital and at outreach camps.

Training

The training includes theoretical and practical parts. In the theoretical part trainees are taught the basic anatomy and physiology of the eye using models and charts, with some information about common eye diseases like conjunctivitis, corneal ulcers, cataracts, glaucoma, diabetic retinopathy, age-related macular degeneration, common refractive errors, etc. Special care should be taken to give clear information about the advantages of intraocular lens implants (IOLs) over conventional aphakic corrections.

In the practical part, trainees are shown cataract extraction with IOL implantation and other common surgeries. Videotapes, if available, should be used to teach them. Otherwise they can observe surgery in the operating theatre. They should watch how local anaesthesia is given so that they can inform patients about general surgical procedures. The trainees should observe the ophthalmologist and experienced counsellors in the outpatient department to learn about the commonly asked questions and how they are answered.

Although the prognosis for vision should always be discussed by the ophthalmologist, trainees should also be aware of the visual prognosis in certain conditions like diabetic retinopathy, age-related macular degeneration and the glaucomas. In this way, while assuring the patient of the need for surgery or treatment, they would not be inaccurate in assessing the prognosis for visual recovery.

Attending outreach camps is also included to give trainees exposure to work in the community.

Work

Counsellors sit at their desks in the outpatients' department with a model of an eye, specimens of cataract, IOLs, one pair of +10 dioptre spectacles and information materials on common eye diseases printed in the local language. They first go through the doctor's advice in the case record and try to answer the patient's questions accordingly. In developing countries patients usually prefer conventional cataract surgery, which costs less than extracapsular cataract extraction (ECCE) with IOL implantation. Counsellors, in the hospital setting, try to change their ideas by showing them the heavy, cosmetically unacceptable + 10 dioptre spectacles, and then telling them of the other advantages of IOL implantation. They also mention that recurrent expenditure to buy aphakic corrections works out costlier than paying for an IOL. They inform the patient about the common minor post-operative problems, including the future possibility of posterior capsular opacification, and their remedies.

Taking time to listen and answer questions, near Pune, India *Photo: Murray McGavin*

Counsellors should allow sufficient time to discuss different issues raised by the patient, including personal problems. Some patients, for example, may prefer to postpone surgery until the next harvest season in order to have enough money to pay the costs involved. The counsellor examines the case record to see whether the surgery is urgent and answers accordingly. It is always advisable to discuss problems with the ophthalmologist whenever the counsellor feels it is necessary.

Apart from surgical aspects, counsellors tell patients about the importance of regular medication and follow-up in glaucoma and maintenance of personal hygiene.

In the inpatients' departments counsellors visit every patient and ask them about their problems so that they can give better advice as to the patient's future. Patients who undergo surgery are requested to motivate other villagers to come forward for surgery and also to visit the outreach screening camps, if held nearby, to encourage others attending the camp.

The outreach screening camps may be the first opportunity to motivate patients for surgery and then counsel them in favour of an IOL implant in the hospital. When the benefits of surgery are well explained most patients agree to undergo surgery. Counselling becomes more effective when patients' relatives, who may be paying for the surgery, also take part in the discussion. Counselling becomes easier if somebody who has already undergone surgery is present in that particular camp. In the camps, there is an opportunity for group discussion. Patients are also given information printed in the local language describing the advantages of cataract surgery with IOL implantation. Some eye hospitals take patients for surgery on the screening day itself but, where the patients are admitted a few days later, the information leaflets help them to think over the matter and reminds them of

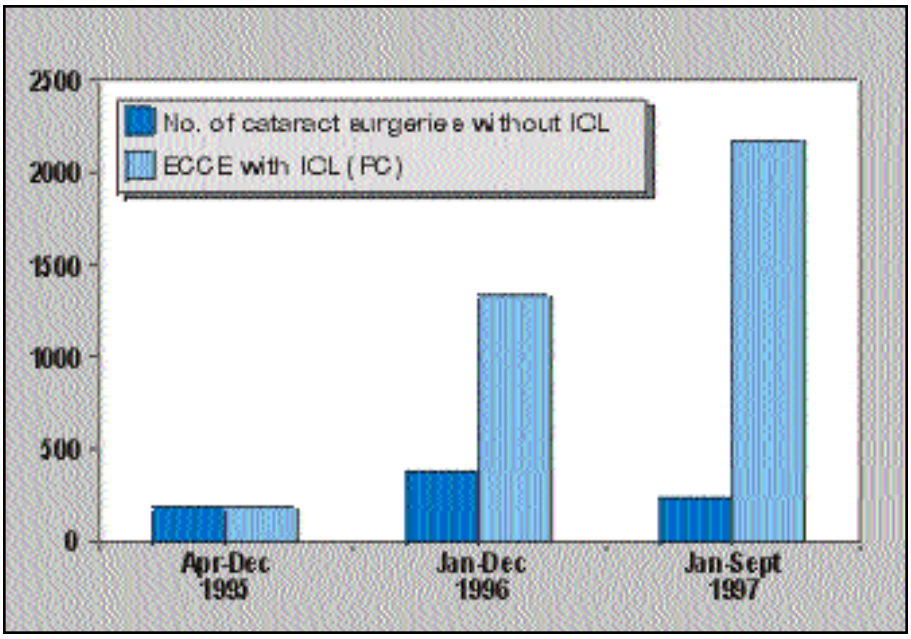

Fig.1: Cataract Surgical Performances since April 1995 at Vivekananda Mission Ashram, West Bengal.

the issues discussed with the counsellor.

Counselling is very much needed by patients who have glaucoma, especially primary open angle glaucoma, because these patients do not find any apparent benefit from either medical or surgical treatment. This is probably the toughest job for a counsellor in a rural setting. Counselling is the only way to ensure compliance with regular medication, if given, and periodic follow-up.

In the developing world many patients may be visiting a doctor for the first time in their lives, often when they are very old. These patients particularly benefit from counselling. Very often counsellors are more effective motivators than doctors.

Additional Benefits to the Eye Department

Counsellors give very good feedback to the hospital management regarding patient care facilities. They talk directly to the patients about their problems. They can suggest necessary modifications in services, and they are often the best people to propose the kinds of patient information that is needed.

In some parts of the world, especially in northern and eastern parts of India, there is a preference for undergoing eye surgery in the winter. The mistaken belief is that the results of surgery are better at that time. As a result, the eye wards remain under-utilised in summer and over-crowded in winter. It has been seen that effective counselling of patients can change this seasonal preference, and the hospital can perform uniformly throughout the year.

Vivekananda Mission Ashram

Vivekananda Mission Ashram is a missionary welfare organisation, named after the Indian philosopher, Swami Vivekananda, which has been working in rural Medinipur District, West Bengal, since 1962. In the beginning the Ashram established general education institutions, particularly for girls. Later they established a residential school and vocational training and rehabilitation centres for the visually impaired. Encouraged by the success of these institutions, a community based rehabilitation (CBR) project was set up in 1994 with the support of Sight Savers International. The Ashram felt the need to establish an eye treatment centre to support the work of the CBR project, and, in May 1994, a 30-bedded eye hospital (Netra Niramey Nitekan) was built which started functioning in April 1995.

From the outset, importance has been given to patient counselling. Initially doctors spent a lot of time explaining everything to the patients. Gradually counsellors were trained from among the CBR field workers, and they took over the job of explaining. The catchment area of the hospital is approximately 4.5 million people living in the eastern part of the district. The number of beds has increased to 66, and the volume of work has increased dramatically since the eye work started.

Good counselling has been one of the prime contributors behind this success. In 1995, 50% of the 377 cataract operations done between April and December were ECCE with IOL; by 1996 this figure had increased to 78% of 1,714 cataract operations performed over the 12 months. Data for the first nine months of 1997 show that 90% of the 2,406 cataract operations done were ECCE with IOL (Fig. 1).

Common Questions Asked by Patients

1. Regarding Cataract Surgery:

a. ***Can I avoid surgery since I'm already very old?***
Explain the possibilities of hypermature cataract and lens-induced glaucoma.

b. ***Is there any eye drop to cure cataract?***
No. Don't spend money in buying expensive 'anticataract' eye drops, which claim to be effective.

c. ***Can I expect clear vision after surgery?***
The counsellor should carefully go through the case sheet and find out whether there is any comment in the record regarding visual prognosis.

d. ***Can I wait until next winter for my surgery? I believe wound healing is better in the winter season?***
Advise that there is no seasonal difference in the success of surgery.

2. Regarding IOLs in Hospital:

a. ***Why should I go for this newer technique?***
Explain the advantages of IOL implantation over conventional aphakic correction.

b. ***How long will the IOL last in my eye?***
Usually life long.

c. ***Is it necessary to change the implant again?***
No.

d. ***Will the implant get displaced if I do a lot of physical labour?***
No, but you should be careful about injury to the eye.

e. ***Will it cause irritation inside my eye?***
No.

f. ***Do I need to wear spectacles after IOL implantation?***
It depends on your personal needs and occupation. For example, reading spectacles may be required. Even if you need spectacles they will not be thick and heavy.

Conclusion

Counselling improves the quality of service and builds up the confidence of patients, which in turn increases motivation in the community to receive eye care services and to accept IOL surgery. Certainly pseudophakic patients are much more satisfied customers than aphakics. This helps the organisation to attain both the trust of the community and financial viability.

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Is there a Role for ACIOLs in Developing Countries?

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Background

The use of anterior chamber intraocular lenses (ACIOLs) in the 1970s produced a flood of late complications mainly from corneal decompensation and uveitis with secondary glaucoma plus hyphaema (UGH syndrome). This led to the development and widespread use of posterior chamber intraocular lenses (PCIOLs) and to ACIOLs receiving a bad reputation. The ACIOLs used were of a non-flexible closed loop design.[1]

During the 1990s a flexible open loop ACIOL has been increasingly used in the western world for secondary implantation, or if planned extracapsular cataract extraction (ECCE) with PCIOL has not been possible due to capsule rupture.

Recent studies in Asia and Africa have evaluated the open loop ACIOL following intracapsular cataract extraction (ICCE) in order to determine whether ICCE + ACIOL is a safe procedure. If so, this could be used as an alternative to ICCE with aphakic spectacles for surgeons who are not able to perform ECCE/PCIOL surgery.

Results

In Nepal, Hennig, Evans and colleagues undertook a clinical trial to compare ICCE with aphakic spherical spectacles against ICCE with a standard 19 dioptre ACIOL. There were approximately 1000 eyes in each group and a 91% one year follow-up was achieved. The functional, poor outcome, defined as a patient seeing less than 6/60 in the operated eye with no added correction, was 5.1% in the IOL group and 5.4% in the spectacle group at one year. The major causes of poor outcome in the ACIOL group were refractive error (2.4%) and uveitis (1.5%).[2]

The preliminary results of the 2-5 years follow-up in Hennig's study indicate that long-term complications are uncommon. There has been no case of corneal decompensation. The poor outcome (corrected visual acuity less than 6/60) in the ACIOL group, is the same as in the spectacle group, but there are many more functionally blind people in the spectacle group due to lost or broken spectacles. There is preliminary evidence that secondary glaucoma may be more common in the ACIOL group, but the data needs further analysis. Some of the patients with poor outcome at one year have recovered vision in the later follow-up

Several small studies evaluating ACIOLs in Africa are on-going. Cook has followed 63 eyes with ACIOLs to 6 months.[3] Seven patients had a functional vision of less than 6/60, but all these improved to 6/60 or better with correction. Approximately one third of eyes in the ACIOL group had some uveitis, compared to half this figure in a similar group receiving ECCE/PCIOL.

Comments

Many surgeons in Asia and Africa routinely perform ICCE surgery. Aphakic spectacles are problematic due to distorted vision in the short-term and loss/breakage in the long-term.

A safe ACIOL would give an alternative to aphakic spectacles for patients having ICCE surgery. The emphasis of the ACIOL studies has therefore been to document poor visual outcome so as to determine whether the new open loop ACIOLs cause problems or not.

ICCE surgery has more complications related to vitreous disturbance (i.e., cystoid macular oedema, retinal detachment and corneal decompensation) than ECCE. However, posterior capsule opacification has to be considered as a potential long-term problem after ECCE in patients who do not return for follow-up.

An ACIOL should only be inserted after an ICCE if the vitreous face is not protruding and the anterior chamber is deep. It is recommended that an ACIOL should not be inserted if vitreous has been lost or is present in the anterior chamber. It is essential to obtain secure wound closure, with at least 5 interrupted sutures, if an ACIOL is implanted.

After cataract surgery right eye. Maturing cataract, left eye
Photo: Murray McGavin

Conclusion

The evidence so far suggests that the open loop ACIOL is a safe lens in the hands of experienced ICCE surgeons. Uveitis, secondary glaucoma and cystoid macular oedema are complications, but relatively uncommon provided a good ICCE is performed. These surgical complications are less common than poor outcome due to correctable refractive errors.

Further experience with ACIOLs in heavily pigmented African eyes is needed, to see if increased inflammation is associated with poor visual outcome or can be adequately managed.

It is not suggested that ICCE/ACIOL should replace a well performed ECCE/PCIOL procedure, but rather that it is another option, which may be the appropriate procedure in certain situations, and preferable to ICCE with aphakic spectacles, provided an uncomplicated ICCE has been performed.

As more evaluation of the results of PCIOL and ACIOL surgery in developing countries becomes available, it is self-evident that all IOLs require a well trained competent surgeon if they are to be used safely. To use an analogy – it is not so much the car (IOL) that causes the accident, as the driver (surgeon)!

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Workshop on Community Ophthalmology, Peshawar, Pakistan

Participants in the Community Ophthalmology Workshop, Peshawar, Pakistan, chaired by Professor M Daud Khan.

8-10 September, 1997

September 8, 1997, was a milestone in the history of prevention of blindness in Pakistan. The first International Conference on Community Eye Health in Pakistan was held at the recently established Pakistan Institute of Community Ophthalmology (PICO), Peshawar. This is the centre of expertise for community ophthalmology, both in Pakistan and in the WHO Eastern Mediterranean Region. It now runs the first ever one year MSc Course in Community Ophthalmology for this Region. The eye care infrastructure of the area offers many opportunities for students to observe and participate in actual community eye health programmes.

Pakistan is a developing country with an estimated population of 140 million. The prevalence of blindness is high, at 1.78%. There are 1,500 ophthalmologists, which means one ophthalmologist for just under 100,000 people. However, the situation becomes more complex when we consider that more than 80% of ophthalmologists practice in urban areas which constitute only 25-30% of the country's population.

Cataract accounts for 66% of blindness. Other major causes of blindness in adults are glaucoma and corneal opacity. The major causes of blindness in children are cataract, buphthalmos and hereditary retinal disorders. Vitamin A deficiency has not received due attention so far.

The participants in this conference represented leading ophthalmologists involved in community eye health in Pakistan, together with Dr Murray McGavin and Dr Clare Gilbert of the International Centre for Eye Health (ICEH), London. A World Health Organization (WHO) representative was also present during the opening session. The conference focused on the issues involved in the development of a sustainable primary eye care infrastructure in Pakistan, utilising both curative and preventive methodologies.

In the opening session, the scope and limitations of community ophthalmology were highlighted. Community ophthalmology is considered to be 'eye health of the people, by the people, for the people'. It leads to self-reliant and healthy communities. However, the lack of professional and political commitment, financial restraints and public lack of awareness are major barriers to its development.

Dr Clare Gilbert very clearly demonstrated that Pakistan needs a cataract surgical rate (CSR) of 2,300 per million population for cataract blind people per year, and 5,000 per million population for those who are visually impaired each year. These figures contrast with the current CSR of 1,050 cataract operations per million per year. Dr Gilbert stressed that cataract services need to be made more accessible and affordable, backed up by strict quality assurance.

Cataract surgical camps have been popular in Pakistan since its independence in 1947. However, quality control has remained a major issue. A report was presented of an eye camp where suitable facilities were available and, therefore, appropriate surgery was carried out, using an operating microscope with intraocular lens (IOL) implantation. It not only created an awareness in the community about the advantages of IOLs, but also resulted in sustainable activation of an otherwise under- utilised rural health centre. Participants also stressed that, along similar lines, we must strengthen our district level eye care services to make them accessible to all. In this regard, it was also highlighted by one of the speakers that training of community health workers and other paramedical staff at primary eye care level is an essential step towards making a community self-reliant. The general outline of such a programme was presented.

An interesting discussion focused on various management issues relating to eye care delivery at primary, secondary and tertiary levels. It was agreed that the population and service ratio at present is inadequate in terms of personnel, money and materials. Criteria should be laid down for the appointment of various levels of eye care providers, ensuring, at the same time, both an adequate service structure and job satisfaction. It was suggested that the district health service should act as a management unit and a full time non-professional programme manager should be recruited. At tertiary level and beyond, the important development of sub-specialities was stressed. It was also agreed that community participation in primary health is an essential component of eye care service delivery. Students, teachers, physicians, community leaders, multipurpose workers, etc. can all play effective roles.

Apart from cataract surgical services, other major blinding diseases - glaucoma, trachoma, diabetes, vitamin A deficiency and trauma - were also discussed. Methodologies in screening for glaucoma and diabetic retinopathy, and preventive measures against vitamin A deficiency and ocular trauma were amongst the topics discussed.

A very important and interesting review of the current status of childhood blindness in Pakistan was ably presented by Dr Clare Gilbert. The prevalence of childhood blindness in Pakistan is probably about 1/1,000 children which amounts to 60,000 blind children and another 180,000 with low vision. Based on this, it can be calculated that for one million population, about 450,000 children need surveillance and screening services, while about 1,000 will need rehabilitation in the form of special education and low vision devices. For the same population, curative services will be needed for 3 glaucoma cases and 10-12 cataract cases per year, while genetic counselling will be required for another 10-15 children, blind from genetic disease.

Dr Murray McGavin, apart from his useful contributions during discussion, provided the participants with very valuable information regarding the various non-governmental organisations fighting against blindness.

On the last day, recommendations made earlier were summed up, finally amended, and approved by the delegates for necessary action.

Rapporteur: Dr Tayyab Afghani, Pakistan Center for Prevention of Blindness, Al-Shifa Trust Complex, Rawalpindi, Pakistan.

Dr JOSEPH TAYLOR
OBE FRCS FRCOphth

Dr Joseph Taylor, ophthalmologist, esteemed colleague and friend, died on 21 November 1997, after a short illness in his home town in England. He was 69.

For more than 30 years Dr Taylor worked as one of the great pioneers of eye work in Africa and, with immense personal commitment, promoted the development of programmes for the prevention of blindness. Recognising the importance of 'avoidable' blindness, treating eye diseases, making sure that the poorest of the poor were guaranteed high quality medical care, he gave practical expression to his strong Christian belief. He dedicated all his energy into this work until the very last hour of his life.

Born on 18 February, 1928, in Falkenau, today called Sokolof, in the Czech Republic, he was forced, when still very young, to escape from the Nazi occupation to England. From 1946 until 1951, he studied medicine at St. Bartholomew's Hospital Medical College and, one year after his final examinations in England, left for Kenya and Tanzania. Supported by his wife, Joan, he developed medical services for the poorest people of these populations under the most difficult conditions.

Confronted with innumerable people suffering from blindness or from eye diseases, and, in view of the then still very poor quality of eye care in the countries of East Africa, Dr Taylor decided to study ophthalmology in London. Afterwards he concentrated all his efforts on eye care programmes such that developments in eye care in the whole of Africa progressed enormously.

In addition to his work as ophthalmologist at the Kilimanjaro Christian Medical Centre, Moshi, Tanzania, Dr Taylor was highly esteemed in many projects and programmes as an Ophthalmic Consultant. In this capacity, he was instrumental in developing policies and strategies for blindness prevention in developing countries and these are still considered to be models in the field. The emphasis of his work also focused on the development of appropriate technology in eye care, for example the local production of eye drops and the manufacture of low-cost eye glasses in local workshops. For this initiative and for many other innovative ideas he acquired an outstanding international reputation.

The name of Dr Joseph Taylor will always be closely linked with the history of eye care in developing countries and with

the work of Christoffel Blindenmission. His personal commitment, his caring nature and his passion to meet the needs of others, will always be an example for ophthalmologists all over the world.

We say good-bye to an outstanding personality. We look back on his life and work with admiration and gratitude. Our deepest sympathy is with his wife, Joan, who was at his side from the beginning to support him in all his efforts, and with his children and relatives.

Christoffel Blindenmission
Bensheim
Germany

BOOK REVIEW

A TEXTBOOK OF CLINICAL OPHTHALMOLOGY

A Practical Guide to Disoders of the Eyes and their Management (2nd Edition)

Editors: Ronald Pitts Crick FRCS FRCOphth
Peng Tee Khaw PhD MRCP FRCS FRCOphth

This compact book, which surprisingly has nearly 600 pages, is packed with information and advice for the busy general practitioner, medical student, optometrist or ophthalmologist-in-training.

The text is well illustrated with colour plates, black and white photographs and line drawings. We have the advantage in 'eyes' that we can often 'see' the problem, and the line drawings should encourage eye health care workers to illustrate their own clinical findings.

Thirteen eye specialists have contributed to the text. The section on Common Ophthalmic Problems, where symptoms and signs as they present to the practitioner are considered, is rightly described as a 'book within a book'. From the perspective of the Journal of Community Eye Health, it is good to find significant reference to infections, infestations and nutritional diseases, recognising the great importance of tropical and subtropical ophthalmology in the appreciation and understanding of eye diseases worldwide.

D D Murray McGavin
MD FRCS(Ed) FRCOphth
Editor

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Abstract

A clinic based survey of blindness and eye disease in Cambodia

Ian Thomson

Aims: To survey the spectrum of eye disease presenting to rural eye clinics in Cambodia.

Methods: A total of 1381 patients seen consecutively at 13 eye clinics were examined and the findings recorded.

Results: 231 (16.7%) were bilaterally blind (visual acuity <3/60 in both eyes); 263 (19%) were unilaterally blind, and 169 (12%) had low vision (visual acuity <6/18 in the better eye). Cataract was the commonest cause of visual loss in all three categories and was responsible respectively in 69%, 40% and 55% of each group. Trachoma was diagnosed in 13% of patients. Thirty-three of them needed lid surgery for trichiasis.

Conclusion: With the difficult practical and political situation in Cambodia there seems little prospect of making substantial inroads into the backlog of avoidable blindness in the near future.

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Br J Ophthalmol 1997; 81: 578-80.

Risk of ocular hypertension or open-angle glaucoma in elderly patients on oral glucocorticoids

Edeltraut Garbe
Jacques LeLorier
Jean-Francois Boivin
Samy Suissa

Background: Ocular hypertension and open-angle glaucoma are well-known side-effects of treatment with topical ophthalmic glucocorticoids. There is uncertainty about the risk of these disorders with oral glucocorticoid therapy.

Methods: Data from the Quebec universal health insurance programme for the elderly were used to identify 9793 patients with a new diagnosis of ocular hypertension or open-angle glaucoma, or on newly prescribed treatment for these disorders (cases). 38,325 controls were randomly selected from ophthalmology patients seen in the same month and year as the case (index date). Current use of oral glucocorticoids were defined as that within 14 days of the index date. All glucocorticoid doses were converted to the equivalent amount of hydrocortisone. The case-control analysis was done by conditional logistic regression and adjusted for age, sex, systemic hypertension, diabetes mellitus, ophthalmic glucocorticoids, glucocorticoid injections, and variables related to general health.

Findings: The mean ages of cases and controls were similar (74.9 [SD 6.3] vs 74.7 [6.4]). The adjusted odds ratio of ocular hypertension or open-angle glaucoma for current users of oral glucocorticoids compared with non-users was 1.41 (95% CI 1:22-1.63). There was a dose-related increase in the adjusted odds ratios for current users: 1.26 (1.01-1.56 for less than 40 mg per day of hydrocortisone, 1.37 (1.06-1.76) for patients on 40-79 mg per day, and 1.88 (1.40-2.53) for patients on 80 mg or more per day. The odds ratios also increased with the duration of treatment over the first 11 months of exposure.

Interpretation: The use of oral glucocorticoids increases the risk of ocular hypertension or open-angle glaucoma in elderly patients. In patients in this age-group who need long-term treatment with high doses of oral glucocorticoids, monitoring of intraocular pressure may be justified.

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Lancet 1997; 350: 979-82

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The importance of prenatal factors in childhood blindness in India

J S Rahi FRCOphth
S Sripathi BSc
C E Gilbert FRCOphth
A Foster FRCOphth

The causes of visual loss in 1411 children attending schools for the blind in different geographical areas in India are described. Ninety-three percent (1318) of the children were severely visually impaired (SVI) or blind (i.e., corrected acuity in the better eye of <20/200 [<6/60]). In 60% of SVI/blind children vision loss was attributable to factors operating in the prenatal period, in 47% the prenatal factors were known and definite, and in 13% prenatal factors were the most probable causes. Hereditary retinal dystrophies and albinism were seen in 19% of SVI/blind children and 23% had congenital ocular anomalies. There were variations in the relative importance of different causes by state. The observed pattern of causes of visual loss is intermediate between those seen in industrialised countries and in the poorest developing countries. This suggests that strategies to combat childhood blindness in India need to address concurrently, both preventable and treatable causes. The need for aetiological studies, particularly on anophthalmos and microphthalmos, is highlighted.

Mother and child in Central Asia.
Photo: Ruth McGavin

Published courtesy of :
Dev Med Child Neurol 1997; 39: 449-55.

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 an article on Clinical Trials in the next issue - ***Editor.***

SYMPOSIUM REPORT

International Symposium on Collaboration with Traditional Healers for Prevention of Blindness in Africa
Blantyre, Malawi
September 10-12, 1997

Traditional healers are an integral and important part of most cultures and will remain so. They are respected members of their communities and live and work in the most rural areas. They are the most commonly consulted and most accessible primary health care providers in all African communities.

Eye care programmes have been effective at the district hospital level in many countries. However, there has been limited success in expanding activities beyond this level and in overcoming many of the barriers, precluding cataract surgery uptake by rural communities.

Collaboration with traditional healers in Zimbabwe and Malawi has been successful, with an increase in the cataract surgery uptake and a decrease in the incidence of blinding corneal ulcers due to harmful traditional eye medicines.

Eye care programmes could increase accessibility of services to rural communities by including traditional healers, following appropriate reorientation, in the network of primary eye care providers in the locality. Traditional healers are interested in collaborating with eye care workers. There is now a clear imperative for collaboration. This should be based on mutual trust and respect between the two disciplines as both should complement each other to the benefit of the patient.

Recommendations

1. Collaboration should focus on improving the capacity of traditional healers to assist their patients, on referral, on counselling patients and their families, and on decreasing harmful traditional practices.
2. There is great variation in traditional healer practice. Approaches to collaborative blindness prevention programmes, therefore, must reflect local conditions.
3. A clear understanding of traditional eye care practices is necessary prior to the development of collaborative activities and training.
4. Such collaborative activities should be consistent with Ministry of Health policy and guidelines.
5. Ministries of Health are encouraged to set policy and guidelines, and establish and regulate traditional healer associations. To protect the public, regulations concerning advertisements and service outcome should apply to all health providers whether they are traditional healers, couchers or biomedical personnel.
6. If a Ministry of Health allows the use of pharmaceuticals by traditional healers, consideration should be given to sustainability and possible adverse effects of combining pharmaceuticals and traditional eye medicines.
7. Collaborative activities should be patient focused, community based, culturally appropriate, and sustainable.
8. Training programmes for healers should be participatory in nature, reflecting the unique role healers have in their communities; the proposed manual should be adapted as necessary.
9. Collaborating eye care programmes should only be established where there are adequate training, support, referral, and feedback capacities.
10. Couching remains a significant cause of visual loss and blindness; the provision of affordable, accessible, high quality modern cataract surgery, with good visual outcome, would reduce this practice.
11. Operational research is needed to clarify the best approaches to collaborative interventions.

Organizing Institutions:
BC Centre for Epidemiologic & International Ophthalmology
University of British Columbia, Vancouver, CANADA
(Dr Paul Courtright DrPH) and
Lilongwe Central Hospital
WHO Collaborating Centre for the Prevention of Blindness,
Lilongwe Central Hospital,
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(Dr Moses Chirambo MD)

The International Symposium on Collaboration with Traditional Healers for the Prevention of Blindness, held in Blantyre, Malawi from September 10-12, 1997 was supported by the Task Force of the Partnership Committee of Non-Governmental Organizations collaborating with the World Health Organization Programme for the Prevention of Blindness. Symposium participants included eye care professionals from Africa, North America, Europe, and Asia as well as traditional eye healers from Zimbabwe and Malawi. The organisers and participants would like to thank the NGO Task Force and WHO as well as the International Eye Foundation/ Malawi for their support of the Symposium.

☆☆☆☆☆☆

STERILIZATION OF SURGICAL INSTRUMENTS

Dear Sir

May I mention another method of disinfection not listed in your recent article (Issue No. 19, 1996), which I have used in eye camps in Pakistan. This is the use of steam without an autoclave. One uses a deep sterilizer only partly filled with water, with trays of eye instruments suspended in a rack above the water level. We have used either bottled gas or electricity for heating; I prefer the former in the absence of mains electricity as one can then provide for the lighting with a much smaller generator. Small instruments soon heat up in the steam above the closed sterilizer, and are given at least five minutes. There are several advantages: the steam is largely free of any impurities in the water; the instruments may dry more quickly than after boiling; and there does not appear to be any problem from blunting. Some surgeons and eye theatre nurses will question the efficacy of the method, and demand a longer exposure to steam, but I have not met infection definitely attributable to the method. I would be interested to hear of the experience of others.

Dr Ralph Heaton
15 Glenway, Bognor Regis
West Sussex
PO22 8BU, United Kingdom

Comment

The steaming method [that is without pressure] is, a popular and relatively effective method of disinfection in developing countries Please note - it does not sterilize.

It is important to:

1 Maintain the level and boiling point of the water.
2 Ensure the water is at boiling point before placing the instruments in the steamer - 'heating up' is not sufficient!
3 Steam the instruments for a minimum of 10 minutes and preferably 20.
4 Cover the receptacle.

The questionable access of steam to the lumens of instruments is a serious concern. The steaming method is sometimes chosen only in an attempt to avoid blunting of instruments. There is no other direct benefit of steaming. Rather, adding 2% soda to the water in the boiling method is advised.

References

1 Brouwer MR, Hardus, PLL. Sterilization of ophthalmological instruments. *Tropical Doctor* 1988; 18: 174-6.
2 Hughes RA. Sterilization of Instruments in Isolated Hospitals. *Tropical Doctor* 1982; 12: 87.

References to steaming without pressure would be welcomed. Despite an extensive literature search none have been traced. We welcome correspondence from our readers regarding experience and opinion in this area.

Dear Sir

The article 'Sterilization and Disinfection' in Vol 9, Issue No. 19, 1996, is very useful and informative.

In 'Chemical Methods' acetone is not discussed. Has it become obsolete or is there any other reason?

Dr Kapal Mit Singh
Chandigarh
India

Comment

Acetone has been a popular antiseptic/disinfectant used by ophthalmic personnel, particularly in developing countries.

The authors chose not to include it in the Journal article because a literature search on the agent was inconclusive, with such conflicting opinions that it was believed to be unhelpful in an article designed to give clear guidelines. Current texts do not list it as a recommended chemical disinfectant.

The disadvantages of using acetone are that it evaporates rapidly; it is a safety hazard because it is highly inflammable and it does not destroy fungi and spores.

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1 Drews RC. *Ann Ophthalmol* 1977; 9: 781-4.
2 Agarwal V, Sharma S. *Indian J Ophthalmol* 1993; 41(1): 20-2.

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Journal of Community Eye Health

Indian Supplement to the Journal

A supplement is published with the Journal of Community Eye Health in India. Printing and distribution is kindly supported by the Danish Assistance to the National Programme for Control of Blindness in India. The most recent issue has the following articles:

Organisation of Mega Eye Camps in Underserved Areas

Dr VK Tewari, Prof D Bachani, Dr R Jose

High Volume and High Quality Cataract Surgery. The Beas Model.

K Vaidyanathan

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LANDMINE INJURY

Dear Sir

Mr Hernando Fabiao, a farmer from a village next to Inharrime (Inhambane Province, Mozambique), had to have his right eye enucleated by the ophthalmic assistant after injuries sustained to his eye when he stepped on a mine, on August 27, 1997. Hernando's left eye has sympathetic uveitis which hopefully will resolve - his current vision is finger counting at 2 metres. Luckily, Hernando did not lose his leg; but he had injuries to his chest and arms. Hernando explained that there are quite a few mines scattered around his village, some visible next to the school play area. He and his community have been begging the government for assistance in removing the mines, but due to the huge number of mines in Mozambique (about 1 million) their area has not been de-mined, as yet. Hernando is in his 30s; his family needs his efforts just to survive.

Hernando agreed to let me take his picture after I explained that a friend of mine is very much involved in the campaign to ban landmines and he would like the picture to use for his work.

Paul Courtright DrPH
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******

Mr Hernando Fabiao, Mozambique, after a landmine injury destroyed his right eye.
Photo: Paul Courtright

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