Strategic issues in preventing cataract blindness in developing countries*

L.B. Ellwein¹ & C. Kupfer²

Cataract blindness is a public health problem of major proportions in developing countries. Intracapsular cataract extraction with aphakic spectacles has been the standard surgical technique for restoring sight. Because of image magnification in the operated eye, however, the result in unilaterally blind patients is less than satisfactory. Fortunately, with the availability of low-cost intraocular lenses (IOL) and ophthalmologists trained in extracapsular surgery, it is now practical to intervene successfully in the unilateral case.

The need for increased attention on the quality of the visual outcome is only one of three important strategic issues in cataract blindness control. The existing high prevalence of cataract blindness in developing countries and an increasing cataract incidence due to an aging population require substantial increases in surgical volume. The third issue relates to cost. If significant increases in surgical volume and quality of outcomes are to be realized without an increased need for external funding, service delivery must be made more efficient. The expansion of IOL surgery for unilateral blindness is a favourable trend in ensuring financial sustainability of delivery systems; patients can be operated on while still economically productive and able to pay rather than waiting for bilateral blindness and a less favourable economic and social impact. If the quality, volume, and cost issues are to be successfully addressed, operational and structural changes to eye care delivery systems are necessary. These changes can be effected through training, technology introduction, management of facilities, social marketing, organizational partnerships, and evaluation. With improved understanding of the critical factors in successful models their widespread replication will be facilitated.

Introduction

Of all the causes of avoidable blindness, cataract is the most prevalent in developing countries. The International Agency for the Prevention of Blindness (IAPB), which was established in 1975, has held five general assemblies dealing with world blindness. A review of their published proceedings from the years 1978, 1982, 1986, and 1990 makes it clear that certain operational elements underlying world cataract blindness and its prevention keep recurring (1–4). The present paper identifies these operational elements and relates them to the components of a successful strategy for improving cataract services.

Although the issues discussed here were in large measure prompted by consideration of the experience in India over the past two decades, the framework is broadly applicable to other developing country situations. Further, only issues relating to the provision of cataract surgery, and not eye care services in general, are dealt with. It is recognized that cataract services are not delivered through independent facilities dedicated to this one condition, although some facilities specialize in eye care services, and that the primary health care system is frequently the first point of contact for patients with cataract blindness. The optimal provision of cataract surgery depends upon both horizontal integration with other general and specialized eye care services and vertical integration with primary eye and health care for the identification and referral of cases. Nevertheless, our attention is on the cost-effective delivery of cataract surgery.

Blindness defined

Blindness is commonly defined on the basis of the best corrected visual acuity in the better eye. The World Health Organization uses a visual acuity of <3/60 in its definition of blindness. Bilateral impairment at this level is referred to as social blindness. It represents a level of impairment where the individual

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would find it difficult to walk around unguided. A less strict definition of blindness is used in reference to so-called economic blindness — visual acuity of <6/60 in the better eye. In developed countries, such as the USA “legal” blindness is defined as ≤6/60 (<20/200).

When visual acuity impairment at these levels is present in only one eye, the worse eye, the individual is categorized as unilaterally blind. If the worse eye is ≥6/60 the individual is not considered blind but categorized as visually impaired so long as visual acuity is <6/18. Fig. 1 illustrates these blindness and impairment categories.

**Cataract blindness**

Cataract — an opacity in the normally clear, crystalline lens of the eye — is accompanied by a decrease in visual acuity and becomes increasingly common with age, such that for those aged 65 and over, signs of cataract can be expected in 90% of cases examined. Although thought to be a result of age-related biochemical changes in the lens, cataracts can result from disorders during pregnancy, eye infections, medications, exposure to radiation, or injury and may therefore affect children and young adults. Various systemic diseases, such as diabetes or metabolic disorders, may also increase the risk of cataract development. Commonly observed differences in cataract blindness prevalence, based on sex or urban/rural settings, are most likely (but not always) related to differences in access to surgical interventions and population demographics, and most often correlated with low socioeconomic status (5, 6).

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**Fig. 1. Blindness and impairment categories.**

<table>
<thead>
<tr>
<th>BETTER EYE</th>
<th>WORSE EYE</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/6</td>
<td>6/6</td>
</tr>
<tr>
<td>Adequate vision</td>
<td></td>
</tr>
<tr>
<td>≥6/18</td>
<td>≥6/18</td>
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<tr>
<td>Visually impaired</td>
<td></td>
</tr>
<tr>
<td>≥6/18</td>
<td>&lt;6/18 ≥6/60</td>
</tr>
<tr>
<td>Unilateral blindness</td>
<td></td>
</tr>
<tr>
<td>≥6/18</td>
<td>&lt;6/60 ≥3/60</td>
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<tr>
<td>Economic blindness</td>
<td></td>
</tr>
<tr>
<td>≥6/18</td>
<td>&lt;6/18 ≥6/60</td>
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<tr>
<td>Social blindness</td>
<td></td>
</tr>
<tr>
<td>&lt;6/60 &lt;3/60</td>
<td>&lt;6/60 &lt;3/60</td>
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Cararact blindness is a significant public health problem. WHO's estimates of worldwide blindness (<3/60) range between 27 and 35 million people, cataract being the main cause of blindness in developing countries.b

Surgery and optical correction

Fortunately, cataract is an eminently curable form of blindness. The affected lens can be removed surgically in a procedure that takes 5–20 minutes, depending on the technique used. Intracapsular cataract extraction (ICCE), in which the entire lens including its capsule is removed, has been the standard surgical technique. Sight in the aphakic eye is then restored through spectacles.

The ICCE/spectacles solution can produce excellent results in terms of visual acuity for central vision. What suffers is the peripheral field of vision, which is effectively limited to the area seen when looking straight ahead (approximately 30 degrees). This surgical solution is also limited in that it is suitable only for bilaterally blind cases. The spectacle lens is further from the retina than the normal lens in the other eye, producing a 30% larger retinal image. Because of the difference between the magnified image and that in the normally sighted eye, the unilaterally blind case will experience a serious vision fusion problem. The brain cannot fuse two images of notably different magnifications to yield binocular single vision.

Extracapsular cataract extraction (ECCE), in which the posterior lens capsule remains, accompanied by posterior chamber implantation of an artificial intraocular lens (IOL) — made of clear surgical PMMA (polymethyl methacrylate) plastic — has almost entirely replaced the ICCE procedure in the developed world. This approach does not have the field-of-vision and fusion problems mentioned above. However, this procedure requires increased surgical skill, an operating microscope, special instruments, and an intraocular lens, which to date is more costly than aphakic spectacles.

A significant complicating factor with ECCE surgery is that the posterior lens capsule can obstruct the transmission of light if it becomes opaque. This so-called 'secondary cataract' is estimated to occur in as many as a third of operated cases within three years and 50% in five years. This complication can be treated by the use of laser surgery on an outpatient basis.

Prevention of cataract blindness in developing countries

Sight restoration

Unilateral cases

The emphasis in cataract blindness programmes, such as the national blindness control programme in India, has been on increasing the number of cataract operations performed.5 Targets are set and results monitored. However, if the number of cataract operations is used as the primary indicator of accomplishment, the results in terms of sight restoration will be overstated. This arises for several reasons, an important one being the high frequency of operations in unilaterally blind cases, which ignores the most serious segment of the blindness problem — the bilaterally blind. It is not uncommon for one-third or more of persons operated to be unilateral cases (7).

The rationale behind operating on the unilaterally blind individual is to improve vision and not to restore sight, but even that is not necessarily achieved. The ECCE/IOL approach is needed for vision improvement in the unilateral case. Such cases operated with ICCE and given spectacles will invariably face a visual outcome that is unsatisfactory because of the image fusion problem. In fact, the outcome may be perceived by the patient as a worsening of vision. The unilateral case is, no doubt, among the 33–50% of cases found not to be wearing aphakic spectacles after surgery (5, 8, 9).d If IOL technology is not available for the unilateral case, the appropriate medical decision is to forego surgery in all but those few cases where the cataract is hypermature (anterior lens capsule bulging, nucleus floating in liquid cortex) and the patient is at high risk for complications, such as phacolytic glaucoma.

The aphakic individual who presents for an operation in the second eye is in a similar situation to that of the unilaterally blind case. Assuming that the first cataract operation was successful, this individual is, at worst, unilaterally blind. Again, vision improvement is the rationale for operating on the second eye. To circumvent fusion problems, the second eye must be operated using the same surgical procedure as was used in the first eye. If ICCE with spectacles was used in the first eye, an IOL should not be implanted in the second eye. Aphakic correction must be used for both eyes. Previous aphakic patients are common (30%) among cases who present at both eye camps and fixed facilities (9).


Outcome failures

Fortunately, the bilaterally blind case faces a favourable prognosis with either surgical procedure. Failure to realize vision restoration is the exception in the hands of an appropriately trained surgical team. When a failure does occur, it is generally due to one of two reasons.

First, because the typical cataract patient is an elderly individual who may have other blinding conditions, such as macular degeneration or glaucoma. If the eye is blind with cataract but not from cataract, cataract surgery will not restore sight. Unfortunately, it is not always possible to detect a co-existing cause of blindness during the pre-surgical examination, particularly when the lens is so opaque that it is not possible to view adequately the retina and optic nerve. The patient must be told that success cannot be guaranteed.

Complications during or after surgery are the other reasons for failure to restore vision in the cataract patient. Surgical complications, such as vitreous loss, early post-operative complications such as wound leakage, hyphema, endophthalmitis, and late post-operative complications such as retinal detachment, and cystoid macular oedema can arise in up to 7% of operated cases (10). Even under the optimal circumstances in developed countries, 1% or more of cases cannot be managed successfully and the operated eye becomes blind (11); in situations of resource constraints and deficiencies in training, this percentage can be much higher. Considering the risks of operative and post-operative complications, plus failure to detect other ocular pathologies at the pre-operative examination, the expected sight improvement in the operated eye is only 85–90% of cases (10).

When there is no medical contraindication to cataract surgery, the decision to operate rests with the patient. Only patients can assess whether the level of visual impairment has an adverse effect on their lifestyle and in doing normal things. Only the informed patient can decide if the impact of visual impairment is sufficient to offset the small risk of complications associated with any surgical procedure.

Operated cases

Operations in the unilaterally blind and aphakic cases along with outcome failures have a significant impact on what is actually achieved in terms of sight restoration. The data in Table 1 represent 10 years of eye camp experience in India. Only the visual acuity in the better eye is presented, which reflects the blindness category of the person. Pre-operatively, it is reasonable to assume that the worse eye is the cataract blindered eye that needs operation. Post-operatively, the better eye may be either the operated or unoperated eye, depending on the outcome of the surgery and the pre-operative visual acuity in the unoperated eye. For bilaterally blind patients, the better eye after surgery is most likely the operated eye. The post-operative visual acuity is that measured at discharge with a standard spectacle correction; further improvement would be possible if all patients were refracted several weeks after surgery and the results were based on the best corrected visual acuity. However, if patients were not provided with prescription glasses at that time, the best corrected visual acuity measurement is of no practical value.

What is remarkable about these data is that 46% of cases operated were unilateral cases, presumably including a sizeable number of unilateral aphakic cases. Some of them may have been only unilaterally impaired, not blind. Without visual acuity information for the worse eye, we cannot tell. Another important observation is that 14% of the most severely impaired cases, the bilateral socially blind, remained blind post-operatively. This assumes that all the 1215 post-operative socially blind cases came from the 8985 pre-operative socially blind cases (and not from less severe cases that were made worse by failed surgery in the better eye). Taking the econom-
ically and socially blind together, 18% remained blind. Out of the 20 757 patients operated, no more than 9195 (44%) were bilaterally blind cases whose sight was restored.

Patient satisfaction

In the quest to meet targets in terms of the number of cases operated, there may have been less emphasis on improving visual function and on the patient’s satisfaction with the outcome. This is a problem in the developed world also, as evidenced by a recent U.S. government report on cataract surgery (12). The patient seeks improvement in vision and cannot be expected to understand or be sympathetic to the medical or other reasons behind a less-than-satisfactory outcome (13).

This lack of attention to the patients’ perceptions of visual function and satisfaction with surgery has effects beyond the individual. Each operated patient is a testimony to either the merits or pitfalls of cataract surgery. A pilot investigation of the process patients go through before deciding whether to seek/accept cataract surgery showed that 68% spoke to someone who had been operated for cataract. A dissatisfied patient who is particularly vocal can thus deter others from seeking sight restoration, particularly in countries or areas with many such patients.

More has to be done in maintaining the follow-up of patients; simply measuring visual acuity in the operated eye and declaring that the objective of vision restoration has been achieved is not enough. Post-surgery follow-up must include the monitoring of medical complications and the assessment of patient-reported improvement in vision (14-16). Evaluation from the perspective of the patient is discussed below.

Operational elements

Strategy

Increasing attention is being given to cataract initiatives in the developing world. Lions International is supporting new cataract projects in South America, India, and south-east Asia as part of its more than US$ 100 million initiative launched in 1990 to eliminate preventable blindness. The World Bank is providing the government of India with credit for US$ 117.8 million, which was negotiated in 1994 to help finance the expansion of cataract surgery in both capability and services. These new initiatives must deal with the ultimate index of success, which is the patient’s perspective on the quality of the visual outcome achieved. The challenge is to maintain in the unilaterally blind case — and to restore in the bilaterally blind case — the ability to function effectively in day-to-day activities.

Because of the increasing magnitude of the cataract blindness problem worldwide, attention to improvement in outcome quality is not sufficient. New emphasis must be given to increasing the output of resources currently available, particularly the volume of surgery carried out by available ophthalmological manpower. For example, with the aging of the population in India, the number of people over 65 years of age will increase from 37 million in 1990 to 102 million by 2025 (17). This is expected to result in a threefold annual increase in the incidence of cataract cases over this period. With substantial but achievable increases in productivity, the current levels of surgical manpower are adequate to meet this increased caseload.

The cost of cataract surgery must also be controlled, from the perspective of the patient and the funding source. Increases in surgical volume and quality of outcomes should be sustainable without the need for external funding; cataract surgery delivery must reach financial sustainability, which means that, in the aggregate, patients’ incomes should well exceed the operation costs. The new IOL-based approach must be affordable to a large majority of those with early signs of visual impairment due to cataract, the intervention taking place earlier in the progression of the disease while the patient is still economically productive and able to pay.

Operationally, quality, volume and cost are addressed through training, technology, facility management, social marketing, partnerships, and evaluation (Table 2).

Training

Training is critical if the quality of cataract surgery is to be improved and offered in a relatively high-volume setting. Medical college training programmes in developing countries are frequently inadequate because of (1) a lack of rigour in ensuring that the training of the student systematically progresses from surgical observation to assisting with cases to independent surgery under close supervision, and (2) insufficient attention to the importance of one-to-one training.

Inadequacies in training arise, in part, because of an insufficient case load at the training institution. Each trainee should assist with a minimum of 25 cases, perform a minimum of 25 cases under close supervision, and perform a minimum of another 25 cases independently for each of the two procedures
— ICCE and ECCE with IOL. Historically, these training norms have not even been consistently satisfied with ICCE training. The same deficiencies persist and are even more serious in ECCE/IOL training, to which the current emphasis is now shifting.

Fundamental to improving the training of new ophthalmologists, and the retraining of many of those already in practice, is the need to address obvious deficiencies in training facilities and in the technical and teaching skills of the trainers. To ensure that each teaching institution is up to new standards in terms of surgical technique, operational efficiency, and teaching methods, “train the trainer” programmes may be needed. Programmes might also be designed where faculty from developed countries provide continuous on-site training in medical colleges, ideally involving longer-term (3–5 years) collaboration.

Training of operating theatre personnel as a team is important if efficiency is to be increased. The ophthalmic surgeon, surgical nurse, and operating room assistants should be trained to work as a team in the management of their tasks in the surgical theatre. This is achievable with streamlining of operating room and patient flow procedures. Efficient institutions, such as the Aravind Eye Hospital in India, have demonstrated the high levels of productivity that can be achieved.7

Efficiency in the operating theatre is not enough, however. The infrastructure supporting the theatre must be effectively managed as well. Management relating to the various facets of facility operations cannot be overlooked. Medical clinic personnel, particularly well-trained ophthalmic nurses and assistants, are important in the pre-operative screening and examination of patients and in post-surgery follow-up. Inventory management, patient logistics, clinic operations, utility management, purchasing and maintenance of equipment, and many other functions in service delivery can frustrate the achievement of productivity norms. In this regard, management training to deal with deficiencies in facility operations is as important as training for the surgical and medical support team.

The final area for training deals with programme management. These skills are important for the optimum utilization of facilities and other resources within a community or health district. The challenge is to integrate the efforts of the various providers with emphasis on maximizing patient access to cataract services at an affordable cost.

**Technology**

The momentum of ECCE surgery is well under way.9 From the patient’s perspective this trend is favourable. It results in an improved outcome compared to ICCE with spectacles, so long as experienced surgical teams and the requisite equipment are available to ensure the absence of surgical complications (15, 18). From the ophthalmologist’s perspective, the ECCE/IOL procedure is also preferred: it represents the forward side of the technology curve. The issue is to effect its rational expansion, with strict attention to infrastructure and training needs (19).

The IOL technology has important and potentially positive implications for financial sustainability of new cataract initiatives. As the proportion of cases operated shifts to those with unilateral blindness, the proportion of those able to pay something for cataract surgery should increase. It is conceptually sound to intervene before the patient has experienced blindness, i.e., before the economic situation of the family unit becomes adverse.

The availability of ECCE/IOL surgery in an appropriate setting is the key. Because of the added complexity and medical precautions that must be taken with ECCE/IOL surgery, it is not appropriate for the surgical eye-camp setting. Emphasis must be given to holding outreach screening camps and transporting the patients to fixed facilities with a properly equipped operating theatre. Unilaterally blind

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patients in ICCE eye camps should be made to understand that surgery with spectacles is not an appropriate procedure for them, and they should be assisted in reaching facilities where ECCE/IOL is available. If this is not done, there will eventually be two increasingly differentiated classes of unilateral cataract patients: those operated in eye camps with aphakic spectacles who will almost always be dissatisfied with the result, and those operated in fixed facilities with IOLs who will constitute the group of satisfied customers.

Two factors complicate the widespread introduction of ECCE/IOL surgery. One is cost. Under present circumstances, the cost of the IOL is not competitive with the initial cost of spectacles; it becomes more favourable when periodic replacement of aphakic spectacles is taken into account (20). Although IOLs of proven quality at a cost of $10 are becoming available through channels with limited capacity, the price for patients in the private sector is likely to be well above this figure.

In a similar fashion, the added cost of specialized equipment (primarily A-scan echography, an operating microscope and laser for capsulotomy procedures) can be a deterrent. As the ECCE/IOL volume increases, this initial equipment cost can be amortized over an increasing number of patients. The unit patient cost will become relatively insignificant. The major components of cost are, and will continue to be, personnel time and overheads associated with facility operations, and not the equipment or consumable supply costs. The latter are only the more easily recognizable components of the costing equation.

Facility management

It is apparent that in too many instances, current resources are underutilized. Bed occupancy in many medical college and other government hospital ophthalmology units is low. The underlying reasons may relate to unavailability of operating theatre time and poor efficiency in the scheduling and use of what theatre time is available for ophthalmology patients. Further, the growing practicality of outpatient surgery in developing countries as an alternative to routine hospitalization suggests that bed capacity is not likely to be a constraint in most settings (10, 15).

Patient throughput is also adversely affected by malfunctioning or out-of-service equipment. As small an item as a burned-out bulb can disrupt the productivity of the service team. Critical pieces of equipment must be included under a strict schedule of preventive maintenance. The issue of spare parts availability is of pivotal importance in keeping equipment functioning in a dependable fashion.

Social marketing

To complement the build-up in capacity for high-volume surgery on the supply side, demand must be substantially enhanced. Much of this will occur naturally over time as word of high-quality outcomes at low or no cost to the beneficiary spreads, and as word of less-than-satisfactory outcomes diminishes. However, rather than waiting for demand to build primarily by word-of-mouth, a focused social marketing effort may be indicated, especially to reach potential beneficiaries residing in remote rural areas. Involvement of beneficiaries in developing the content of public education materials is necessary to ensure success in these efforts.

It must be recognized that several obstacles can stand between the potential beneficiary and the service provider. These obstacles are of an educational, psychosocial, logistical, and financial nature. Cataract blind persons may not be fully aware of their condition and that something can be done about it. Out of fear, or owing to reports of bad experiences from other patients, they may not be receptive to the notion of a surgical remedy. Because of geographical isolation they may not have access to a service facility or are deterred by logistical difficulties in seeking access. Finally, lack of financial resources may ultimately stand in the way — transportation costs, lost wages by accompanying family members, unauthorized fees/bribes at the service facility, etc. Unless each of these potential obstacles are addressed in an explicit fashion, a large proportion of the blind population will not be reached by any programme, however well funded (7).

Partnerships

New initiatives frequently can be facilitated if planned and implemented as a partnership between providers in the government, and voluntary and private sectors. Nongovernmental organizations are currently very active in blindness control; in many geographic areas they carry the bulk of the cataract surgery load. The relationship between government and nonpublic sectors can become closer — a partnership arrangement built upon trust and shared responsibilities (21). These arrangements have the potential to control overall implementation costs while increasing the surgical volume.

In some areas, it may be appropriate for government facilities to be opened to private or nonpublic providers. Professional disincentives now exist among government ophthalmologists to operate on potentially paying patients in government facilities: these patients are lost as paying patients in the private and voluntary sectors. Partnership arrangements
must address this problem. There should be no disincentives to increasing the volume of patients treated in government facilities.

**Evaluation**

Programme targets should not emphasize the number of eyes operated but the number of cases in which vision has been successfully restored or improved. This requires follow-up, after a reasonable post-operative period, of each patient with measurement and recording of the presenting visual acuity in both eyes. The responsiveness of the delivery system, the competency of the triage, and the quality of the visual outcome as determined by beneficiary assessment might best be accomplished through an evaluation distinct from the usual post-surgery follow-up. Beneficiary outcomes are a problem that must be addressed and monitored to ensure improvement.

Evaluation of the performance of the provider system in utilizing resources is also needed. This evaluation would include fixed facilities, such as a district hospital, and camp activities. The mix of cases screened, examined, and operated (by age, sex, and visual acuity) are to be reported along with the surgical volume per surgical team, length of post-operative stay, and vision restoration results.

**Conclusions**

Ultimately, cataract surgery delivery systems must be financially sustainable — the income must equal expenditures. Considering the magnitude of other legitimate claims on government expenditure for health care in developing countries, sustainability cannot be dependent upon increasing government allocations. It is necessary to look to the beneficiaries for cost recovery. This financial viability is fostered by delivery of a high quality of vision outcome to an increasing number of patients earlier in the course of their disease. Interventions must increasingly take place before productivity and economic losses set in and while the patients are still able to pay. Generally this will mean that IOL surgery must be available for the unilateral or early bilateral, visually impaired individual.

The ability to prevent cataract blindness through early surgical intervention is critical in moving towards financial sustainability. We must increasingly become aware of the importance of prevention of cataract blindness. Early versus late surgery is not an either/or issue since most cases operated while unilaterally blind would have progressed to become bilaterally blind before death. If the appropriate technology is available, we no longer need to wait until the person is bilaterally blind.

For whatever reasons, at present too many patients are receiving less than a satisfactory visual outcome. The decision to undergo cataract surgery is certainly influenced by information obtained from previously operated patients, whether family or friends. By decreasing the proportion of dissatisfied patients — resulting from improper triage, unrecognized other pre-existing ocular pathology or surgical mishaps, we can minimize adverse publicity and help the social marketing that must be done to overcome it.

Fortunately, models of high-volume and high-quality surgery at low cost exist, several institutions within India providing a good example. As we better understand the critical factors for their success, widespread replication with appropriate adaptation will be facilitated. This is necessary if we are to reach the turning point in lifting the burden of avoidable cataract blindness.

**Acknowledgements**

During the past two decades the authors have been very fortunate to discuss these issues with government officials, WHO staff, nongovernmental organizations, professional societies, and other interested parties. This paper represents the sum total of these interactions. The assistance of Diane Barber in the preparation of this manuscript is also acknowledged.

**Résumé**

Prévention de la cécité par cataracte dans les pays en développement: questions de stratégie

Parmi toutes les causes de cécité évitable dans les pays en développement, la cataracte est celle qui a la plus forte prévalence et, bien que techniquement soignable, elle reste un problème d'importance majeure. Pendant des décennies, l'extraction intracapsulaire de la cataracte est restée la technique chirurgicale de référence, la vision de l'œil aphaque étant restaurée au moyen de lunettes. Beaucoup de malades qui seraient améliorés par une intervention ne sont pas opérés, tandis que d'autres qui sont opérés n'en tirent pas de bénéfice; le potentiel d'amélioration de la vision dans l'œil opéré ne reçoit pas toujours l'intérêt voulu lorsqu'il s'agit de déterminer quels malades doivent être opérés. Des enquêtes montrent que les malades ne portent pas leurs lunettes et que de nombreux malades conservent une vision non satisfaisante. La sélection des malades doit tenir compte de l'intérêt de la technologie disponible dans chaque cas: les sujets
atteints de cécité unilatérale chez lesquels le meilleur œil possède une bonne vision doivent recevoir un implant intra-oculaire si le grossissement de l'image dans l'œil opéré ne pose pas de problème. Heureusement, grâce aux implants intra-oculaires actuels de coût modique et à la formation des ophtalmologues dans le domaine de la chirurgie extra-capsulaire, il est possible d'obtenir un bon résultat visuel dans les cas de cécité unilatérale. Cela est important car il est ainsi possible d'intervenir avant l'altération de la fonction visuelle et l'installation d'une cécité conduisant à des conséquences économiques et sociales défavorables.

L'amélioration de la qualité du résultat du point de vue du malade est une question stratégique critique, mais non suffisante. Du fait de la forte prévalence actuelle de la cécité par cataracte et de l'augmentation de l'incidence de la cataracte due au vieillissement des populations dans les pays en développement, la nécessité d'un volume accru d'interventions chirurgicales constitue une autre question stratégique. Une troisième question tient au coût. Il faut poursuivre les efforts en vue d'améliorer l'efficacité de l'utilisation des ressources; le coût par malade traité doit être abaissé. Les considérations financières font partie intégrante de la viabilité de programmes intensifs et de haute qualité d'opérations de la cataracte. Enfin, les revenus produits par les malades qui peuvent payer l'intervention devraient suffire pour compenser les coûts associés aux cas devant être financièrement aidés. Si la pose d'un implant intra-oculaire est proposée aux malades atteints de cécité unilatérale avant qu'un handicap économe ne s'installe, la proportion des cas opérés alors qu'ils sont encore économiquement productifs et solvables augmentera. Il s'agit d'une tendance positive à la fois du point de vue de la qualité du résultat et de la viabilité financière des programmes intensifs.

Pour obtenir une amélioration de la qualité, une augmentation du volume des opérations et une réduction des coûts, des changements opérationnels et structurels sont nécessaires sur le plan des systèmes de prestation de soins ophtalmologiques. Les modifications nécessaires peuvent être effectuées grâce à la formation, à l'adoption de nouvelles technologies, à la gestion des installations, au marketing social, aux partenariats et à l'évaluation. Il existe déjà des modèles de systèmes de prestation de soins ophtalmologiques comportant un grand volume d'interventions. A mesure que l'on connaîtra mieux les facteurs critiques qui conditionnent le succès de ces systèmes, il sera plus facile de les repandre en les adaptant de façon appropriée.

References


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