Alleviating the Cataract burden: 2000 free cataract surgery program
Report on World Sight Day 2024 Celebration by Eye Unit, Teaching Hospital Jaffna

"What about all the people who can't even get to a hospital? The ones who can't afford the bus fare, or who can't read or write, and don't even know that help is available and that they can get their eyes fixed?....."We need to think about them as well. We have a duty to look after them as well. And, if they can't get to us, we need to get to them."
- Dr Sanduk Ruit

Introduction

Cataract is a cloudy area in the lens of eye, which makes ones vision blurry, hazy, or less colourful. Aging is the most common cause of Cataract, however there are other factors also known to be associated with cataract formation including ocular trauma, genetic composition, exposure to ultraviolet rays and diabetes. Globally, Cataract remains to be the major cause of blindness and the second most common cause of moderate and severe visual impairment(1). Over 100 million people worldwide are affected by cataracts, with 17 million of them being blind(2). In Sri Lanka, one of the low-middle income countries, Cataract is accountable for 66.7% of cases of vision impairment and blindness(3).Over 90% of people with cataract-related visual impairment belong to low- and middle-income countries (LMICs),where access to affordable and efficient treatment, such as cataract surgery, is frequently hampered by low service awareness, a dearth of eye care facilities, and high usage charges and transportation costs. Cataract is a serious visual health issue that disproportionately affects the most disadvantaged in LMICs, particularly those who are elderly, reside in rural areas, are women, or lack formal education. It also significantly impacts an individual's financial and economic standing and affects the quality of life.

Cataract in Northern Sri Lanka

Even though Northern Sri Lanka is a resource-constrained, impoverished region with a predominantly rural population and is reported to have one of the highest rates of blindness and visual impairment in the country, a significant progress has been made in the last few years in treating vision-related conditions and preventing blindness as a result of the free cataract surgery programs offered by the Teaching Hospital Jaffna's Eye unit in Northern Sri Lanka. According to unpublished data from the Eye Unit of Teaching Hospital Jaffna, the number of cataract surgeries performed increased from 4718 in 2021 to 11193 in 2024 between January and October 25th, and the region had already achieved a Cataract surgical rate of 10/1000 in 2023, which is comparable to high-income countries. Furthermore, the cataract backlog has been eliminated from the Mullaitivu, Mannar, Killinochchi, Jaffna and Vavuniya districts.

A glimpse of the program

An effective and comprehensive eye health program will pave the way to achieve good eye health for everyone, everywhere, and ultimately lead to the achievement of INSIGHT

2030.Further eliminating Cataract surgery backlog will aid in enhancing an individual's quality of life by minimizing the waiting time and lead towards the achievement of numerous sustainable development goals. Therefore, a special 2000 cataract surgery program was conducted for a period of ten days in two batches from 14th October to 18th October 2024 and from 21st October to 25th October 2024 by Eye Unit, Teaching Hospital Jaffna in order to celebrate the world sight day 2024.World Sight Day 2024 emphasises the importance of eye care in children and encourages children all over the world to love their eyes. However, this day can also serve as a reminder for people to put first their eye health.

Following the success of earliest free cataract surgery programs, this program was implemented utilising the same strategic techniques. In a nutshell, this program has been designed in such a way that it is approachable, acceptable, available and accommodable, affordable, and appropriate, and allowing access to high-quality care even from remote areas. This was made possible with the support of public-private partnerships, which was vital, multistakeholder involvement and engagement, the execution of S5, and consideration of sustainable development goals.

This special 2000 cataract surgery program was organized and implemented by Eye Unit, Teaching Hospital Jaffna in collaboration with army hospital Palaly along with Assist RR(UK, Sri Lanka) and fully funded by Alaka Foundation from Malaysia through Assist RR(UK, Sri Lanka). Five skilled eye surgeons performed the surgeries from different hospitals. Viz.,

- Dr.M.Malaravan (Consultant eye surgeon, Teaching Hospital Jaffna)
- Dr.M.Gnanaruban (Consultant eye surgeon, Teaching Hospital Jaffna)
- Dr.P.Kiritharan (Consultant eye surgeon, District General Hospital Vavuniya),and
- Dr.M.Arani (Acting consultant eye surgeon, District General Hospital Kilinochchi),and
- Dr.T.Thileepan (Senior medical officer, Teaching Hospital Jaffna).

The program began with patient selection. It was accomplished by disseminating information about the program through appropriate hospitals, satellite centres, and people who underwent eye screening in remote areas. Those with vision problems were requested to register and then examined by trained local professionals. Patients who needed cataract surgery were then enrolled in the program to receive a free surgery. As a result, 1431 patients from the Vavuniya district, 300,108,136,83 patients from Kilinochchi, Mannar, Jaffna and Mullaitivu districts respectively underwent surgery. All surgeries were performed in the Eye Unit of Teaching Hospital Jaffna and carried out on a day-case basis, with patients departing the unit with post-operative appointments scheduled for the following days in their corresponding local hospitals. Before they left, they were given post-operative drugs and guided on how to maintain their operated eyes.

How did we do?

- Eye Unit, Teaching Hospital Jaffna

The eye unit of Teaching Hospital Jaffna was vital in carrying out such massive cataract surgery programs. However, the facility is understaffed and operates with less than half of the human resources recommended by WHO. Furthermore, the infrastructure is neither completely barrier-free, nor is it an elderly-friendly facility. Despite these constraints, this unit is unique and only in the country that can do a significant number of cataract surgeries in a single session because it makes use of the available resources efficiently and effectively. This facility is capable of performing 200-230 cataract surgeries each day with efficiency. In addition, the Eye unit strictly adheres the S5 concept to deliver high quality eye care services in an environment with limited resources, which guaranteeing the success of massive cataract surgery programs. It is worth noting that, in spite of its limited resources, this unit has successfully completed three massive surgery programs, began with 1000 surgeries in the couple of years prior and increased to 2000 surgeries in the current third consecutive program. Furthermore, this eye unit has been endorsed and pledged by EyeSustain.

- Multistakeholder involvement and Public-Private Partnership

A large-scale free surgical program requires a lot of effort to execute it successfully, and relying solely on one partner is not a sustainable approach. A successful outcome required collaboration with multistakeholders. Therefore, in order to achieve a systemic effect that was greater than what any one partner could offer, a collaboration was developed with numerous stakeholders based on their respective strengths. In order to deliver high-quality services, the following stakeholders got involved with the program.

Alaka Foundation from Malaysia sponsored IOLs, consumables, post-operative drugs, staff and patient transportation, staff accommodations and meals through Assist RR (UK, Sri Lanka). Personnel from Palaly Army Hospital gave extra manpower where needed, helped with patient mobilisation, and assisted with health care. Additionally, they volunteered to support the program by assisting with pre-operative administrative tasks and improving theatre work. Allergan helped to pack the post-operative medications and educated patients about post-operative eye care using a QR code system, leaflets, and checklists. Jaffna RDHS assisted in overcoming the staff shortfall by providing nurse force. Alcon and Techno Vision supplied technical support as well as backup machines. DIMO assisted with the mobilisation of surgical equipment from Ananthi Eye Care (AEC).Furthermore, Ananthi Eye Care offered an operating microscope and other necessary equipment were provided by STS Hospital. Vision Care provided a slit lamp for the patient's examination and assisted with the assessment.

What did we accomplish?

During this Special 2000 free cataract surgery program, 2058 people underwent cataract surgery successfully, that aided in reducing the burden of avoidable blindness and enhanced their quality of life. Then, this program contributed to a significant increase in the cataract surgical rate (CSR) that is above 10/1000 and effective cataract surgical rate is gone above 98%(unpublished data).Thus, the prevalence of cataract blindness and cataract-related visual impairment also has been reduced in a resource limited setting. Moreover, patients waiting

time for surgery has become zero in Vavuniya, Kilinochchi and Mannar districts and in coming days it will be reduced to zero in entire Northern Province.

Next, in addition to restoring vision, cataract surgery can increase household income and enhance beneficiaries' quality of life. Thus, in turn reduce poverty and zero hunger ultimately leading to the attainment of SDG 1 and 2.Furthermore, even elderly individuals who serve as the family's primary provider are expected to be productive at work in LMICs. In these situations, those with higher visual function are more likely to work and are less likely to have unintentional injuries or be engaged in accidents at work. Consequently, untreated impairment results from a lack of access to eye care services, which further contributes to unemployment and financial loss. Furthermore, depression resulting from visual impairment might raise unemployment and further reduce productivity. This can be overcome through this program, and thus this program allows for decent work and economic growth as well as enabling good health & well-being by restoring vision and laying a path for the achievement of SDG 3 and 8.

Cataract surgery will reduce motor vehicle crashes and driving-related challenges in individuals, which will lead to the development of sustainable cities and communities, thereby achieving SDG 11. Furthermore, because it is a massive program, it reduces environmental burden by having a lower carbon footprint, making it a greener operational program and enabling the achievement of SDG 13. Involvement of multilingual patients from districts other than northern province bring peace and justice, which are related to SDG 16, and can be called true reconciliation for Sri Lanka.

The vital element of this program is its public-private collaboration, which made it easier to execute in an environment with limited resources and allowed surgeries to go on without interruption. By effectively involving all pertinent stakeholders, present issues can be addressed and evaluated, and future population demands also can be fulfilled, this will move us one step closer to reaching SDG 17 of partnerships for the goals.

Moving Forward

The current massive cataract surgery program has made a substantial contribution to the increase in cataract surgery coverage, will effectively bring the universal cataract surgical coverage closer to INSIGHT 2030, and advances the goal of universal health coverage, which guarantees that everyone can access the high-quality healthcare they require without facing financial hardship. It still needs to be improved, though, particularly in order to reach the most underprivileged segments of society. Additionally, initiatives to raise awareness should be maintained, and regional variations should be controlled by implementing the best practices of regions where corrective surgery is more common. Therefore, following declarations will be taken in order to achieve the universal health coverage.

- Eye screening programs will be implemented in three stages. Such as stage 1 at corresponding hospital eye units, stage 2 in satellite clinics, and stage 3 in rural homes

via house-to-house screening, which will be carried out by trained health assistants in Vanni force with a small logistic team.

- Eye Screening will be implemented in Primary Health Centers.
- Patient waiting period for cataract surgery will be reduced to one month.

We do not stop with cataract surgical programs; we are also working on a variety of additional initiatives. Among these are the "Nahuleswary Vasudevan spectacles program" for free spectacles distribution to schoolchildren which is funded by Alaka foundation through Assist RR and implemented by Eye unit teaching hospital Jaffna , Northern provincial council and Assist RR in order to achieve effective refractive error coverage as well as a project aimed at improving ocular imaging in glaucoma and diabetic patients using teleophthalmology and AI.

Denouement

Cataract is an important public health issue that affects an individual's quality of life. To reduce the blindness caused by cataract, barriers to its care should be eliminated. The program benefited participants to conquer barriers in receiving high-quality eye care, such as the treatment cost, being too old for surgery, being unable to bring a family member with them to a health care facility, poor awareness about cataract, and concerns about the quality of local services. Public-private partnership helped in lessening the burden caused by cataract and smoothened the way for more patients to access high quality eye care services. Further, it brought together a diverse group of stakeholders to work collaboratively towards a common objective. As it is a successful program that helped to plummet the cataract backlog in Northern Province along with the achievement of many sustainable development goals, it can be expanded to reduce the backlog of cataract in other low- and middle-income countries.

References

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