

Training General Physicians in Enucleation of Donor Eye

Ms. R. Brinda Priyadarsini, Former Administrator, Rotary Aravind Eye Bank, Madurai

Introduction

There are around 2.5 million people affected by diseases of the cornea and are still waiting for a corneal tissue. As against the need for 100,000 corneas in a year, the current procurement rate in India is only 22,000 corneas per year¹. Significant advances have been made in the field of eye donation and innovative strategies had been adopted to increase the number of donor eyes. With all these advancements and innovations, the gap between the demand and supply of the corneal tissue is still wide. Eye Banks are excellent models to increase awareness about eye donation among the public.

In India, a significant proportion of the donors are voluntary donors who call on the Eye bank for making donations. Donations from hospital deaths are very minimal compared to home deaths. Majority of the Eye Banks are situated in the urban areas and so their reach is limited. In order for the Eye Banks to be fully functional, they need to work with the community. Currently, Eye Banks target only the urban masses and there is a need to tap the potential rural people for Eye Donation. Eye Banks are not accessible to the rural population and hence the need for setting up Eye Donation centres which carry out the role of Eye Banks by creating Public Awareness and Tissue harvesting. Eye Donation Centres are networks created by the Eye banks in their service area and perform the supporting role of extending the reach of Eye Banking facilities to the community. It effectively focuses on spreading eye donation awareness, tissue harvesting and sending the collected tissue to the parent eye bank for processing and distribution.

In this article we share our experiences on the need for training General Physicians to support the Eye Donation centres in the process of Enucleation.

Eye Donation Centre setups

The Eye Donation centres unlike the Eye Banks are less expensive to setup with only a minimal requirement of instruments and supplies. The success of an Eye donation centre depends mainly on the core group consisting of Administrative and Technical personnel. The Administrative personnel are volunteers who are involved in creating public awareness & eye donation promotion in the community. On the other hand the Technical person selected is any registered medical practitioner with a drive and enthusiasm to work for this noble cause.

Need for training General Physicians

Eye Banks try out different strategies to promote awareness about eye donation. One of the strategies that has really worked in the promotion of actual eye donations is the setting up of Eye Donation centres. The concept of Eye Donation centres came into the Eye Banking scenario mainly to serve the rural people and to expand the services of the Eye Banks into a much wider network. Eye donation centres are centres which are affiliated to the eye banks and are limited to the functioning of Tissue harvesting and Promotional activity.

The Infrastructure and manpower needed for an Eye Donation Centre are much less when compared to establishing an Eye Bank. But they need a steady pool of doctors who can help them in Enucleation of the donor eye. We cannot expect Ophthalmologists to attend to enucleation calls from the Eye Donation

centres as only 57 per cent of ophthalmologists are working for just 10.9 per cent of population in cities whereas only 43 per cent of ophthalmologists cater to the needs of the rest living in villages. While the Ophthalmologist-patient ratio is 1:21,000 in cities, it is a mind-boggling 1:219,000 in villages. This nullifies the utilization of Ophthalmologists for donor calls.

Also there is a least possibility of utilizing the doctors posted at the Government/District hospitals. They cannot leave the hospital premises as they need to attend to any Emergency and Medico legal cases in their hospital, as eye donation calls may be received at odd hours. The District and Government hospitals have always the problem of arranging for the Enucleation kits and other logistics to attend to a donor call. There is always a felt need for General Physicians in enucleation process as eyes have to be donated within 4-6hrs of death. The demand is further enforced, as majority of the donations are from home deaths where the facility for preserving the body for a longer duration is not available.

Legislative aspect

In the developed countries such as the US and UK, Eye Donation laws permit trained & certified technicians to enucleate eyes. State legislations, such as Medical Examiner's Laws, significantly enhanced the availability of donor eyes².

In India, as per the Human Organ Transplant Act (HOTA), only a Registered Medical Practitioner is allowed to enucleate eyes from the deceased which becomes a mandate for Eye banks to train physicians in retrieval of donor eyes.

Role of Eye Donation centers at Rotary Aravind International Eye Bank

The Rotary Aravind International Eye Bank at Aravind Eye Hospital, Madurai is one among the 5 International Eye banks in India Accredited by the International Federation of Eye & Tissue Banks, USA. On an average the Eye Bank collects close to 1500 eyes in a year.

Voluntary Organizations like the Lions and Rotary clubs who actively work for the community

were chosen to become "Eye Donation Centres". The core groups of Technical and Administrative personnel were identified by these clubs to be trained at the Eye Bank in Enucleation procedure, Eye banking techniques, Packaging and transportation of the donor eyes, and in documentation for Eye banking. Currently, the Eye Bank has 26 collection centres in 9 other districts of the state of Tamilnadu and almost 70% of these eyes are received from them.

These centres work in a systematic manner with an average of around 2-3 doctors at their disposal for attending enucleation calls and the maximum number of doctors goes up to 6 in some clubs. The services of the doctors are purely voluntary and they are not paid for the calls. To sustain the interest and motivation of these centres the Eye Bank periodically monitors the process, provides feedback and technological updation in Eye donation and Eye Banking to these centres.

Training

For the General physicians who are involved in enucleation process at the Eye Donation Centres, a one day training programme is organized by the Rotary Aravind International Eye Bank as "**Donor Cornea Retrieval training programme for Physicians**".

This training is provided especially on Sundays as it is the only day the medical practitioners could afford out of their practice. It's a day long programme with a main emphasis on practical training on the techniques of Enucleation of the eye and Eye Banking procedures. The training includes didactic lectures, wet lab session and discussions on the frequently asked questions in Eye donation.

A Certificate of Training is issued following the training programme.

Training curriculum

The training programme is designed to impart technical knowledge to the General physicians with regard to

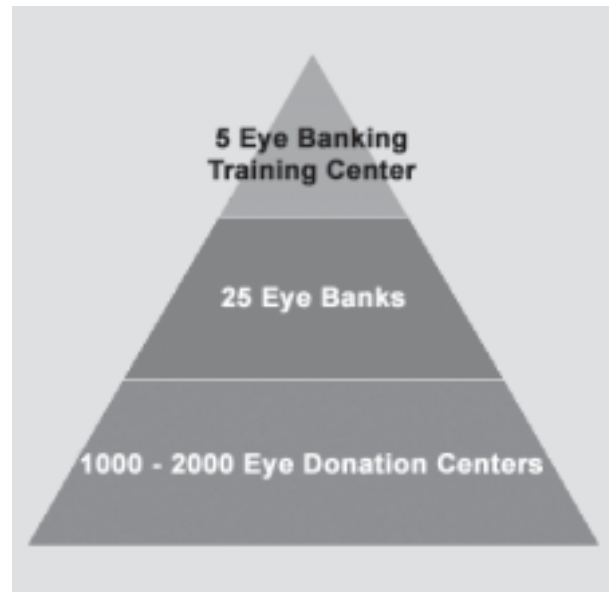
- Donor physical examination and identifying Medical contraindication
- The procedures adopted in Enucleating the eyes

- Blood drawing procedures
- Cleaning & sterilization of enucleation instruments
- Packaging and Transportation of donor corneas
- Infection control during enucleation
- Quality assurance
- Eye Bank data documentation
- Eye donation counselling
- To motivate and create Public awareness

Since its inception in 1998, the Aravind Eye Bank has trained more than 100 General physicians from different districts of Tamilnadu. All these physicians are still active in their contribution to Eye Donation process, even though it heavily demands their time and attention.

Conclusion

At a recent Eye banking meeting organized by the Eye Bank Association of India (EBAI) and National Programme for Control of Blindness (NPCB) it was decided to form a three-tier community eye-banking pyramid to the unsatisfactory eye banking performance in the country. The top tier would comprise of 5 training centres which would be responsible for tissue harvesting, processing & distribution, creating public awareness as well as training and skill up-gradation of eye banking personnel. The middle tier would comprise of a strong network of 45 Eye Banks, (organizations which would comply with all the regulations



stipulated by Govt. of India/EBAI) and these would cater to a population of 20 million each. These Eye Banks would be closely linked with 2,000 Eye Donation Centres (ratio of 1: 50 suggested), each of which would cater to a population ranging from 50,000 to 100,000. In the proposed future scenario, Eye donation centres have a greater role and responsibility to play in improving the performance of Eye Banks (2000 eyes to be collected) which is directly dependent on the cooperation not only from the Ophthalmologists but also from the entire medical community³.

References

1. Punarjyoti "Eye Bank Association of India"
2. Impact of Routine Inquiry Legislation in Oregon on Eye Donations.
3. Proceedings of EBAI - NPCB Orbis workshop in 2004.