

## Chapter 5

### ORGANISING AN IDEAL EYE DONATION CENTRE / EYE BANK

#### Eye Donation Centre

The Eye Donation Centres can be classified into two categories

- (a) Those having facilities for only in-house enucleation :-

In hospitals or nursing homes where there are facilities provided to attend to the calls received within their own premises, the R.M.Os are given the necessary training to remove corneas from the bodies of the dead patients in the extent of deaths taking place within the hospital itself. **They do not attend to calls received from outside.**

- (b) Those having facilities for in-house enucleation as well as to attend calls received from outside :-

There are voluntary organisations and hospitals which also attend to calls **received from outside** by sending the required personnel along with the necessary instruments and equipment to the residence of the deceased or other hospitals etc. where there are no such facilities for enucleation. In our country, many voluntary organisations have involved themselves in eye donation activity as a part of service to the society. As mentioned in Chapter 2, in Mumbai there are two such Centres which have devoted themselves wholeheartedly to the cause of eye donation, one of them being the Arpan Eye Bank, where they have established a panel of family physicians who attend to Eye Donation calls in rotation on weekly basis. The other one is Tarun Mitra Mandal which has also established an intensive network of family physicians and social workers areawise all over Bombay.

The equipment requirements of an Eye Donation Centre would mainly consist of the required number of sets for enucleation (see Appendix D Part (e)), a refrigerator for storing ice-bags or the containers viz. thermocol boxes or thermos or igloos required for transporting eye balls or corneas sterile bottles containing metal clamps for holding the eye balls and an autoclave.

#### Eye Bank

As mentioned in Chapter 1, an ideal eye bank in the true sense of the term must provide all the facilities for enucleation as well as for evaluation, testing and preservation of corneas besides coordinating with various eye donation centres for collection and distribution of corneas.

## (A) BASIC REQUIREMENTS

### I. SPACE

(i) **For Testing Laboratories:** The area housing the laboratory has to be air-conditioned and care taken to ensure the maintenance of aseptic conditions to avoid any type of contamination while processing and evaluating the corneas. A total of 400 to 500 Sq.Ft. space is recommended for accommodating the laboratory space which would also include the space for storage, handling and distribution of corneas. If the facilities are available for blood testing in the hospital, the requirement for the serology testing may not be necessary.

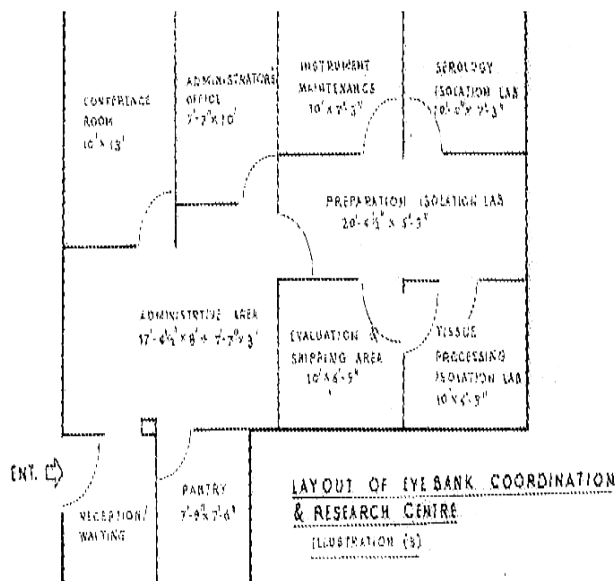
(ii) **For Administrative Purposes:** An additional space of atleast 250 to 300 Sq.Ft., is recommended to house the administration and clerical staff including the space for records, etc.

A layout for an ideal eye bank is shown in illustration (3). A total of 600 to 800 Sq.Ft. space is recommended for a well-planned eye bank to take care of various requirements.

### II. EQUIPMENT

Besides the few sets of surgical instruments required for enucleation [See Appendix D part (e)], other equipment required for an eye bank would consist of:

- (i) Two Refrigerators – one for storing the corneal preservation media and the corneal tissue (frost-free refrigerator with  $-20^{\circ}$  freezer is preferred) with a freezer section to provide ice-bags or shipping containers and the other smaller one would be needed for storing blood and test kits.



- (ii) Blood Testing equipment.
- (iii) Autoclave for sterilizing instruments.
- (iv) Ultraviolet Hood – under which tissue dissection and preservation could be performed.
- (v) Slit lamp for evaluation of cornea.
- (vi) Specular Microscope. This is not an absolute necessity for an Eye Bank (see the note on Corneal Endothelial Evaluation – Chapter 4).

It is estimated that besides the cost of space to set up a well-planned, well-equipped eye bank with all the furniture, fixtures, partitions, equipments including air conditioning, laboratory area etc., would cost around 15-20 lakh of rupees.

### III. ORGANISATION

Depending upon the workload, the number of staff required to man an eye bank would vary. However, in any case the following staff would be most essential for its successful functioning:

- (i) A technologist/s trained in all aspects of eye banking including the screening of corneas and carrying out the necessary blood tests.
- (ii) A Medical Director – either on full-time basis or on an honorary basis for providing overall guidance and advice. An Ophthalmologist with a background in corneal transplant would be desirable.
- (iii) An Eye Bank Manager to exercise an overall supervision of the Eye Bank under the direction and control of the Medical Director.
- (iv) An Administrative Assistant-cum-Clerk.
- (v) A Vehicle Driver (where necessary)
- (vi) Telephone with Fax facility. Further, some additional staff such as office boy/s, an operator for taking and sending round-the-clock messages etc. would be also required depending upon the workload.

### IV. EXPENSES

This can be divided into two categories :

description that the starting and running of a well-planned and well-equipped eye bank would require a lot of funding.

Besides the capital cost involved in the procurement of all the equipment and furniture etc. required for the efficient functioning of the eye bank as described above, the recurring cost involved in maintaining the organisation and for carrying out various blood tests, maintenance of premises, attending to the enucleation and procurement of the requisite medium for preserving the corneas would be quite high.

Because of the absence of any financial stringency in the U.S.A. and U.K., the eye banks in these countries are well-organised and managed professionally being able to provide rigorous check-up as compared to the eye banks in our country. The largest eye bank in Baltimore, U.S.A. collects over 3500 pairs of eye balls annually. It has a full-time staff of 35 persons and its activities occupy a four-storeyed building. An average eye bank in the U.S.A. collects about 500 to 1000 pairs of corneas annually. Many of these eye banks are attached to large hospitals.

A study of eye banking in other countries reveals that in some of the developed countries like the U.S.A., the U.K., etc., the eye banks are run on a "No Profit - No Loss" basis and the recipient individual is charged officially for the eye balls provided. In London, the eye banks charge Pounds 100 to 175, i.e. about Rs.4750 to Rs.8250 per eyeball. In the U.S.A., the charges (labelled popularly as "Tissue Processing Fees") are \$1500 (Rs.70000) and are recovered from the medical insurance. In countries like Canada, besides the Tissue Processing Fees, the eye banks also get a substantial financial assistance from the Government.

### **Funding Scenario in India**

There are eye donation centres or eye banks attached to an eye hospital. The cost of eye banking involving collection, processing and evaluation of cornea to be recovered will form part of overall expenditure of the hospital or will be recovered as a part of corneal transplant only.

Some of the eye donation centres in our country are run by voluntary organisations with the assistance provided by dedicated social workers and medical practitioners. For example, in the Mumbai city, number of such eye donation centres have been started by voluntary organisations assisted by dedicated social workers and medical practitioners. Some of the eye donation centres / banks also pay an honorarium to the medical practitioners who carry out the enucleation of corneas. As the corneas are provided free of cost as per the current practice, these organisations have to depend mostly on private donations.

At Eye Bank Coordination & Research Centre, in Mumbai, the corneas are provided free of cost or at a nominal cost to the poor patients. The Centre is dependent on voluntary donations to cover these costs. For those patients who are well-to-do and who can afford, are

requested to contribute as per their financial capacity towards the actual cost of processing, evaluation etc. The actual cost being incurred by the Centre is around Rs.4500/- - Rs.5000/- per cornea. This does not cover the cost of retrieval of cornea which is incurred by the Eye Donation Centres.

While no funding is provided by the State Government to such Eye Donation Centres / Eye Banks, the Government of India through its National Programme for Control of Blindness has committed to provide a sum of Rs.250 for every eye collected by the Eye Donation Centre and a sum of Rs.500 per eye to Eye Banks towards the cost of enucleation, processing, evaluation and preserving in MK media etc. There is also a non-recurring assistance of Rs.50,000/- provided for development of Eye Donation Centre and Rs.5,00,000/- for an Eye Bank for setting up / strengthening. The details about the same can be obtained by writing to the Secretary, Health Department, Government of India, New Delhi. The application for the financial assistance has to be recommended by the Health Department of State Government and these Eye Banks / Eye Donation Centres are required to be members of Eye Bank Association of India.

However, the experience of the author, while seeking financial assistance under the above scheme for the Eye Bank Coordination & Research Centre in Mumbai has not been encouraging in this regard. In spite of being a registered Eye Bank and meeting all the criteria having a fully trained staff and state-of-the art equipment, the State Government has not responded by way of sending the necessary recommendation to the Central Government without any valid reason.