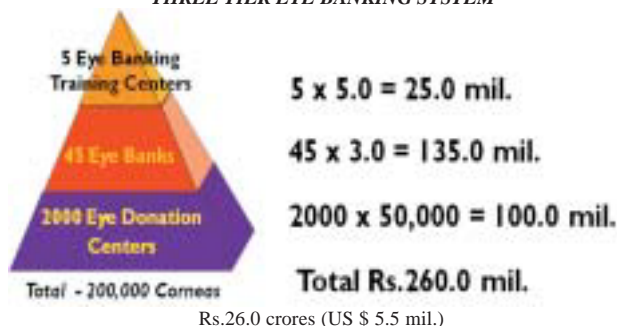


created at a cost of Rs. 260 million (Figure 4). This funding can be mobilized from Government, International Non-Governmental Organizations and local sources. The operating expenses of eye banks will be covered by processing fees (those belonging to upper socio-economic groups pay this as part of fees and for the lower socio-economic groups a subsidy may be provided by Government and INGDOs) and donations.

THREE TIER EYE BANKING SYSTEM



Rs.26.0 crores (US \$ 5.5 mil.)

Figure 4: The pyramid shows number Eye Bank Training Center (EBTC), Eye Bank (EB) and Eye Donation Center (EDC) along with financial requirement to create the system.

Another aspect that merits attention is the number of well-trained corneal specialists⁸. If an annual target of 100 transplants per surgeon is reasonable, India needs 1000 trained specialists. Against this, the current number is less than 200. There is a need to create more corneal training centers as the existing 4 or 5 centers cannot meet the entire demand.

In summary⁸, India needs 50 eye banks, five of which will also be eye banking training centres, 2000 eye donations centres, Cornea Retrieval Programmes in 500 hospitals and 1000 corneal specialists to make a real impact on the problem of this reversible form of corneal blindness. What are the possible next steps to get there? A clear concept and detailed plan must be developed, followed by rigorous implementation of the plan by all concerned in a time-bound fashion. As ophthalmologists, we are obliged to play a leading role in this endeavour and have to play only that role that is appropriate for us. Let all of us involved in the fight against corneal blindness work together for a national goal. If we can make that commitment, we can prove that India is definitely up to the task of serious "Eye Banking" and be a role model for other developing countries.

REFERENCES

1. *Whitcher JP, Srinivasan M, Upadhyay. Corneal blindness: a global perspective. Bull World Health Organ 2001; 79: 214-221.*
2. *Kalevar V. Eye banking in India. Ind J ophthalmol. 1989; 37 (3): 110-111.*
3. *Rao GN. What is eye banking? Ind J Ophthalmol. 1996; 44 (1): 1-2.*
4. *Dandona L, Dandona R, Naduvilath TJ, McCarty C, Nanda A, Srinivas M, Mandal P, and Rao GN. Is current eye-care-policy focus almost exclusively on cataract adequate to deal with blindness in India? Lancet 1998; 351: 1312-1316*
5. *Dandona R and Dandona L. Corneal blindness in a southern Indian population: need for health promotion strategies. Br J Ophthalmol 2003; 87: 133-141.*
6. *Eye bank association of India (EBAI), head office, Plot # 12, BNR Colony, Road # 14, Banjara Hills, Hyderabad. Data obtained on October 6th, 2009.*
7. *Medical Standards of Eye banking in India published by NPCB, Directorate General of Health Services, Min Of Health and Family Welfare, Govt. of India, New Delhi-10011, 1999; pp 1-6.*
8. *Rao GN. Eye banking – are we really upto it in India? Ind J Ophthalmol. 2004; 52(3): 183-184.*

DRUG PROFILE

Terizidone

Terizidone is WHO categorized group IV anti TB drug. It is an antibiotic effective against mycobacterium tuberculosis and also *M. avium* for the treatment of tuberculosis, both pulmonary and extra pulmonary. It is classified as a second-line drug, i.e. its use is only considered if one or more first line drugs cannot be used. Terizidone is obtained by combining two molecules of cycloserine and one molecule of terephthalaldehyde and is a broad spectrum antibiotic which greatly improved the disadvantages associated with cycloserine.

Mechanism of Action: Its mode of action is similar to cycloserine i.e. It acts by inhibiting cell wall synthesis by competitively inhibiting two enzymes, L-alanine racemase and D-alanine ligase, thereby impairing peptidoglycan formation necessary for bacterial cell wall synthesis.

Pharmacokinetics: Terizidone is completely and rapidly absorbed after oral administration. Maximum concentration in blood is achieved in 2 to 4 hrs. It was noted that the blood concentration of Terizidone was higher at all time intervals than the concentration attained in the blood after the same doses of cycloserine. Excretion in urine is quicker in the young ones. Its concentration in the urine after 30 hrs of administration sufficiently exceeded its minimum inhibitory concentration. This justifies its use in the treatment of urogenital TB. It was found that the increase in the dose does not cause a proportional increase in the concentration of the drug in the blood. It is well distributed in all body fluids and tissues. The half-life of terizidone was significantly greater than that of cycloserine, it was significantly higher in the elderly than the young patients. The molecule does not have cumulative toxicity and hence better tolerability.

Indication: Terizidone is recommended for tuberculosis both pulmonary or extra pulmonary caused by resistant strains of *Mycobacterium tuberculosis* or *avium*. It is not recommended for use as monotherapy for infections with tuberculosis. As it has higher concentrations in urine it makes it a better choice of drug for urogenital tuberculosis, specially cystitis and epididymoorchitis.

Precautions and contraindications: It is to be used with caution in patients with psychiatric comorbidities and epilepsy. Also patients who are intolerant to cycloserine. **Adverse effects:** Terizidone intensifies the activating effect on ascending section of the reticular formation of brainstem; the effect is lower than cycloserine. Dizziness, slurred speech, headache and convulsions are amongst the few reported side effects. Others include tremors, insomnia, confusion, depression. The most dangerous side effect is suicidal tendency; nausea, vomiting, skin allergies and rashes are also reported. When used in higher doses that is more than 1 gm per day liver function disorders, congestive cardiac failure, convulsions and coma are reported. **Dosage and administration :** The usual adult dose is 15-20 mg/kg per day in three to four divided doses. Maximum recommended dose is 4 capsules a day ie 1gm daily.