CAUTION IS THE KEY-PREVENTIVE MEASURES FOR CAMP INFECTION

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When one attends the various clinical conferences and symposia and watches audio-visual tapes of masters doing phacoemulsification, one wonders sometimes whether the eye being shown has a cataract or a clear lens extraction is being done. Yes, the status in the metropolitan cities is such that ophthalmologists do operate on patients having vision 6/9 or 6/6(part)
But, unfortunately most of rural India has no access to such modern facilities, hence eye-camps are still the need of the day.

Fortunately most of us are always ready to give our time, energy and skills for this noble cause. However, this article is like a note of caution about the possible risk of infection in such mass surgeries. Our friends from the media and consumer protection are always on the alert. What may have been an opportunity to serve and fulfil your duty towards the society may soon turn into a very messy affair, if God forbid something goes wrong. Apart from breathing heavily on your conscience it can also make you very infamous.

I think we should adhere to certain guidelines to prevent infections in eye camps. For this I have consulted the 'Norms for service delivery in eye-camps' by the National Program for Control of Blindness, articles on sterilization and preventive procedures and drawn upon my own experience of about a thousand successful eye camps.

- ***OUR OBJECTIVE*** - **to ensure better and lasting eye-sight**

ORGANISATIONAL GUIDELINES

- Registration of the eye- camp should be done District Blindness Control Society (DBCS)
- As far as possible the camp should preferably be held at a Community Health Centre (CHC)/ Primary Health Centre (PHC) so that available O.T. facilities are used. In unavoidable circumstances some permanent structure (like school premises/dharamshala) can be used as campsite.
- Constant supervision, monitoring and evaluation should be emphasized in all activities **to ensure high quality clinical outcome.**
  This includes:

1. Checking supplies for expiry dates
2. BSS, RL and Viscoelastics should be inspected for intact packing and for any obvious bacterial or fungal contamination.
   Several reports of cluster post operative Endophthalmitis have been reported implicating contaminated intraocular solutions.

A cluster infection is defined as the occurrence of two or more than two infections at a time or the occurrence of repeated postoperative infection.

3. Surveying the cleanliness of the surrounding area and reassuring oneself of the sterilization procedures undertaken in the O.T.
4. **Restriction of not more than fifty surgeries/day/surgeon**
5. Admission of all patients' one-day prior and initiation of pre- operative preparation (bath, clean hospital linen, pre-op medication)

The number of operations should not exceed 200 per day to maintain quality and safety of surgery, sterilisation and postoperative care.

Case Selection or rather Case Rejection
The following cases should not be operated at the camp but referred to base hospitals

- Eye with discharge/ congestion or other complications
- Very tense and disturbed patients
- Children, if general anaesthesia is needed for operation
- Cases of poor surgical risk (severe diabetes, severe hypertension and those with cardiac problem)
- Cases with a definite history of urinary problems.
- Cases with definite septic foci.

Operation Theatre Asepsis

- Camp or no camp, asepsis is of primary importance
- Autoclaving is ideal for sterilisation of instruments and linen
- Resterilization of instrument sets should be done by chemical sterilisation in 'Cidex' (glutaraldehyde 2%) for 10 minutes followed by the instruments being dipped in rectified spirit and finally washed with boiling water in the sterilizer. The spirit and boiling water should be changed every 10 minutes. Person transferring these instruments should preferably be scrubbed or should handle the instrument boxes with sterile 'Cheatle forceps'. However the use of speed sterilizer for autoclaving in-between two procedures is ideal. To save time one may keep additional sets as required.
- Sterilisation for Phaco hand-pieces between surgeries with the help of speed sterilizers is mandatory. These are available on rent nowa-

days.

- The area designated for operation theatre should be laid out in a particular manner. In fact this may be easier in camps then in private set-ups as there is no constraint of space in rural areas.

  *Outermost area maybe accessed by all personnel and supplies are accepted here.

  * From here there should be access to changing rooms

  *Next to the changing room should be a transfer area where blocks may be given to patients and operated patients can be brought out (access only for O.T. personnel and pre- and post operative patients)

  *The main O.T. area comes next and has to be guarded like the sanctum of a temple. Like in all temples certain traditional manners are to be followed.

- **O.T. manners**

1. Restrict traffic in and out of the O.T. Provision of service window for the supply of instruments and surgical material may help in achieving this.
2. Anyone with an overt infection should not be allowed into the O. T.
3. Use caps and masks (preferably disposable) to cover hair and beard and not as decorative pieces
4. Strict asepsis of hands and instruments.
5. Trim nails and remove jewellery
6. Scrubbing technique: clean with soap, water and brush & then with betascrub or hibiscrub
7. Gowning and gloving should be done by the no touch technique

- **Number of sets of instruments for cataract surgery should be at least three times the number of operating surgeons.**
- **Standard techniques of O.T. sterilisation:**

-copious washing with water
-fumigation with formalin vapours
-fumigation with formalin and potassium permanganate
-carbolisation with 2% carbolic acid

- **Modern methods for rapid O.T. sterilisation**

-ALDEKOL: (contains 6%formaldehyde +6%glutaraldehyde +5% Benzalkonium chloride). For an average O.T. of 20' x 20' x 10' (4000 cubic feet) 325ml of Aldekol dissolved in 150ml of water and sprayed by aerosol for 30 minutes and keeping the room closed for 2 hours is enough for making the O.T. sterile. Switching on the fan/ air conditioner / exhaust fan will allow use of O.T. after 3 hours. This method is especially useful for camps.
- Aerosol disinfection with formalin: formalin90cc + water 100cc sprayed through atomiser('OTICARE or"ATOMIST'). O.T. is closed for 6 hours and then formalin is neutralised using ammonia liquid 90cc sprayed through the same machine. Aerosol disinfection is faster has better penetration and spreads evenly.

(ATOMIST is available with 'Hatchwell Incubators', 5-9-42/A, 1st floor, Basheer Bagh, Hyderabad OTICARE is available at 'Climate Control Services Ltd', 38, Sarojini Devi Road, Secundrabad)

Intraoperative care

- ❑ The eye and the surrounding should be cleaned with betadine solution
- ❑ The lid margins and fornices should be cleaned with povidone iodine5%
- ❑ Since the trolley is not freshly prepared for every case, it is mandatory to maintain sterile environment on the trolley. Same holds good for infusion tubing or R/L bottle.
- ❑ At least the canula for Viscoelastic should be freshly autoclaved for every case if more than one case is done with the same syringe.
- ❑ Minimum of five corneo scleral sutures must be given using 8-0 virgin silk or nylon. Well secured wound assures protection against endophthalmitis as well
- ❑ Sub-conjunctival injection of antibiotics must be given at the end of surgery
- ❑ Use a cartella shield for bandaging.

- **Record keeping**

It is a good practice to maintain record (batch no, expiry date etc.) of every drug used, surgical material and disposables used as well as the sterility indicator strips from every autoclaved drum, which has been opened. Stickers of IOLs implanted should be stuck against the name of the respective patient.

In short quality outcomes should be of paramount importance. Caution must be exercised to ensure that quality is not sacrificed for quantity.
Patient satisfaction and visual outcome will be the ultimate measure of success