

*Note: This presentation was made by **Prof. Dr. Navneet Saxena** of Jabalpur Medical College (NSCB Medical College, Jabalpur at a regular scientific session of the Jabalpur Divisional Ophthalmic Society on Sunday 26-Sep-2010 at Hotel Krishna, Napier Town, Jabalpur over High Tea. There were no sponsors to the session. The following slides are property of the person presenting the slides and due permission is needed to be taken before you may consider using the slides. You may get in touch with us for permission: [click here](#)*

GUIDELINES TO PREVENT INTRAOCULAR INFECTIONS

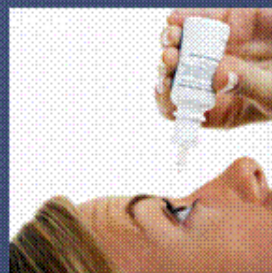
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Pre-Operative Measures

- ▣ **Blood Sugar**
 - ▣ < 200 mg/dL
- ▣ **Urine Sugar- nil.**
- ▣ **Blood Pressure**
 - ▣ Adequately controlled.
 - ▣ Should be < 150/90 mm Hg.
- ▣ **Ocular Examination**
 - ▣ NO syringing.
 - ▣ If Regurgitation positive- **NO** surgery.
 - ▣ If infection of Lids, Adenexa – **NO** surgery.

Pre-Operative Measures

- ▣ **Pre Operative Topical Antibiotics.**
 - ▣ One day prior to surgery : 3-4 times a day.
- ▣ **Physical Clearance.**
 - ▣ For Known Systemic Diseases.
 - ▣ IHD in particular .
 - ▣ Fitness from a Physician
- ▣ **In Mass Surgeries.**
 - ▣ Fitness from physician.
 - ▣ Patients with multiple systemic problems- **NO** surgery.
 - ▣ Combined Surgery – **NOT** to be done.
 - ▣ High risk cases & topical surgeries to be done only by experienced surgeon.



Operative Measures

■ General.

- Anaesthetist / Pulse Oxymeter.
- Emergency drugs – Mandatory.
- Microscope **MUST**.
- Magnifying glasses **NOT** to be used.
- Written informed consent in patient's language.

■ Surgeon

- Sterilized Gloves for every cases.
- Gown– for maximum of 5 cases.
- Surgeon should not come out of OT in OT gown
- Mask should cover nose properly.
- OT Cap- to be worn properly- tucking in all hair.

EYE OT

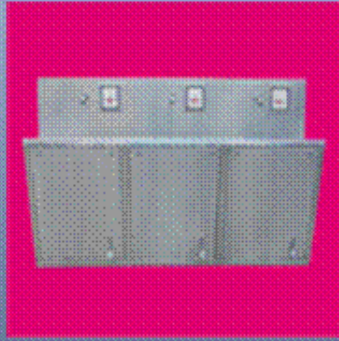
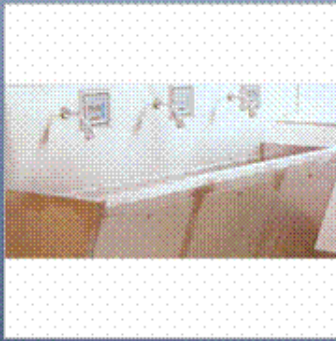


Operative Measures

■ Surgeon

- Position of Hands after scrubbing & Gloving- above waist & upright in front.
- Shoe Covers are NOT to be used
- Separate washable rubber OT slippers- different color coding.
- Separate bathroom slippers.
- Doctors / Staff with URTI / Skin infection or any other obvious infection should not be allowed to enter OT

Scrubbing Station



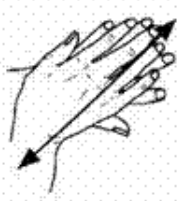
Operative Measures

• Surgeon.

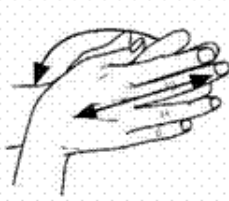
- Gowning / Hand washing/ Gloving as per standard protocol for all OT personnel.
- with Betadine / Chlorhexidine
- Running tap water
- Boiled- cooled water
- No Street clothes inside OT for staff
- OT etiquette to be put on the wall
- No contact procedures like (Biometry / Tonometry) on day of surgery
- Documents sequence of surgeries
- Prefer SICS for mass surgeries
- Do not perform more than 25 cases/ surgeon/day 8 hrs



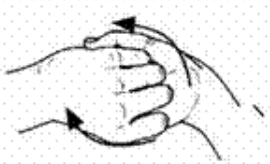
Procedure 1
Wet hands and wrists. Apply soap.



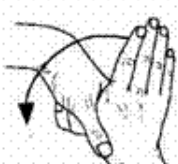
Procedure 2
Right palm over left, left over right.



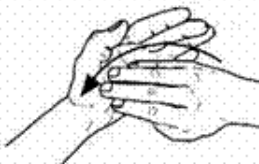
Procedure 3
Palm to palm, fingers interlaced.



Procedure 4
Back fingers to opposing fingers interlocked.



Procedure 5
Rotational rubbing of right thumb clasped in left palm and vice versa.



Procedure 6
Rotational rubbing backwards and forwards with tops of fingers and thumb of right hand in left and vice versa.

NOTE: Repeat procedures 1-6 until the hands are clean. Rinse hands and pat dry.



Operative Measures

■ Irrigating Fluids

- Note the batch Number
- Use Glass/plastic Bottles
- Physical inspection against light.
- Preferably- One bottle /case
- No double autoclaving
- Preferably keep Infusion bottle for 24 hrs after use
- Ringer Lactate , BSS equally effective
- Antibiotics in Irrigating solution- not essential

Operative Measures

■ Wound Security.

- When in doubt- sutures to be applied
- Pahco- Tips & sleeve to be changed for each case.
- Tubing to be primed.

■ Sterility of Patients.

- Bath/facial wash with soap & water before surgery.
- Cancel surgery when there is unusual congestion or discharge
- Speculum must.
- Disposable Adhesive drape to isolate lashes to be used.

Disposable Drapes



Operative Measures

■ Sterility of Patients;

- Patients to wear clean ,washed OT dress with Cap & gown
- Povidone Iodine 5 % for 3 minutes on skin, periorbital area, hairline, tip of nose, nasolabial fold & ear
- In conjunctival sac for 1 minute.
- At the end of surgery Sub Conjunctival antibiotic-steroid- in the inferior fornix.

Post- Operative Measures

■ Post-Surgery care.

- Patch for at least 6 hrs
- Follow up on **1st,3rd,7th,28th,days.**
- With Visual acuity with pin hole
- Slit lamp examination –**MUST.**
- Look for Media Opacity with direct ophthalmoscope.
- Oral antibiotics only in High risk cases.
- Topical antibiotics with steroids for minimum 4 wks
- Personal hygiene to be emphasised.
- Document all post -op findings.
- Surgeon/Assistant to be available at least **7 days.**
- Short acting cycloplegics at the discretion of surgeon.

OT Sterilization

■ Fumigation

- Starting OT for the First time- at least 3 fumigations & preferably get 3 negative culture .
- Running OT – Single Fumigation
- Standard protocol as defined by Govt.
- Formalin 30ml of 40% dissolved in 90 ml of clean water for 1000 cft by aerosol spray- to be left for 6 hrs.
- Then carbolization by 2 % carbolic acid.



OT Sterilization

■ Fumigation

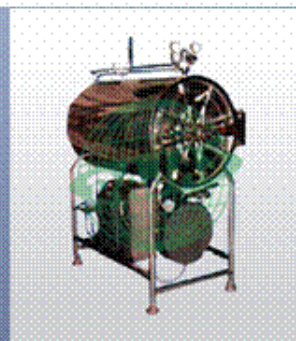
- If fumigator not available 3 to 5 ml of 40% Formalin in 10 gms Potassium Permanganate for 1000 cft to be left for 24 hrs.



OT Sterilization

■ Sterilization of Instruments

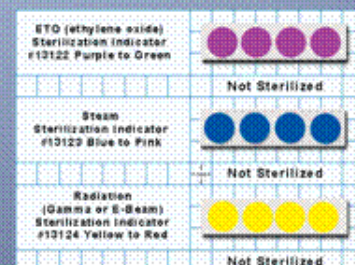
- Preferably ETO/Autoclave or Flash autoclave.
- 6-8 sets should be available.
- In between cases- Autoclaving to be done.
- Chemical Sterilization is **not recommended**.



OT Sterilization

■ Monitoring of Sterilization- 3 indicators.

- One on the outside wrap.
- 2 nd on inside wrap, 3 rd inside the tray.



- Microbiological indicator.
- Log book to be maintained.
- Maximum use of disposable instruments.



What to do ?

■ In case of infection ?

- Dialogue with patients & relatives.
- Explain ; Mechanics of infection, still treatable
- Document all findings.
- Review all sterility factors.
- Refer to higher center.
- Treat energetically with intravitreal Antibiotics.
- Seal & take cultures from OT.
- Seal & keep all solutions used in safe custody.

What to do ?

■ In cluster infections or Outbreak

- 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.
- Inform Authorities
- Institute infection control committees.
- Engage & seek help of Lawyer.
- Handle Press carefully.
- Let Hospital committee handle press.

Checklist

- Random blood sugar ≤ 200 mg %
- BP $< 150/90$ mm Hg.
- Physician Clearance in cases with Systemic Disease.
- Pre-Op Topical Antibiotics.
- Written Informed Consent in patient's Language.
- No Contact procedures on day of surgery.
- Microscope **MUST**.
- Sterilized Gloves for every case.

Checklist

- Disposable Adhesive Drape to isolate Lashes.
- Betadine on skin & Periorbital Area for **3 minutes.**
- Betadine in Conjunctival Sac for **1 minute.**
- Document all findings.
- Instrument Autoclaved / ETO
- **'NO'** Chemical sterilization.

Checklist

- **Maximum use of Disposables.**
- **In case of doubt of Infection:**
 - Talk to patients/ relatives.
 - Institute prompt Appropriate Treatment.
 - Seek help from higher Authorities.

Lesson

- **DO NOT PANIC.**
- Treat early.
- Learn to give Intravitreal Antibiotics with 30 G needle.

