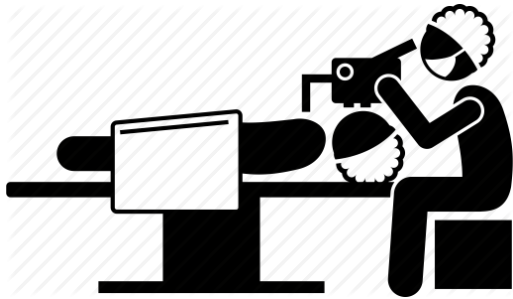


Guidelines for Cataract Surgery at Small Eye Hospitals during COVID-19 pandemic

For Tamil Nadu Ophthalmic Association



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Tamil Nadu
Ophthalmic Association

INTRODUCTION

This interim guidelines are for small eye care organizations that are day care centres with one or two operating theatres performing cataract surgeries. As we restart elective surgeries, the major goal would be to limit spread of SARS-CoV-2 virus with maximum possible protective measures, minimal infrastructural changes and standard precautions to be followed by employees, patients and attenders. These guidelines cover the mandatory requirement from governmental advisory, preferable protocols taken from organizational guidelines like AIOS and advisable practices from good practice patterns in some established organizations.

At the outset, we need to remember SARS-CoV-2 virus which causes COVID-19 is a beta corona virus, whose size is less than 0.2 microns. Infection spreads through mouth, nose or sometimes via eyes by way of either droplets or indirectly after touching contaminated surfaces. With reports from ICMR stating that more than 80% of those who were tested positive were asymptomatic and with limitations in availability of diagnostic tests, we need to assume that all patients are potential COVID-19 positive patients thus it is necessary to take additional precautions during cataract surgery and perioperative period .

As per recent reports, cataract surgery is considered as low risk surgery. Povidone-iodine applied before surgery is an effective agent to decontaminate viruses if any from the conjunctival sac.

Disclaimer:

Facts & details of COVID-19 are still evolving and elective surgeries are just starting across the country. These guidelines are interim and will get modified as and when new reports and publications get published. These are aimed to minimize the risk of spread and not absolutely prevent spread of COVID-19. There are also several guidelines being brought about by state and national level associations with recent updates. These cannot be taken as a proof in any court of law as guidelines and protocols are still evolving and many advisories and proven publications are also likely to come.

Terms used in this document:

SARS-CoV-2	Severe Acute Respiratory Syndrome Coronavirus 2
COVID-19	Coronavirus Disease 2019
Aarogya Setu app	COVID-19 tracking mobile application developed by the National Informatics Centre
AIOS	All India Ophthalmic Society
ICMR	Indian Council of Medical Research
NPCB	National Programme for Control of Blindness
ISHRAE	Indian Society of Heating, Refrigerating and Air Conditioning Engineers
PPE	Personal Protective Equipment
BMV	Bio Medical Waste
AHU	Air Handling Unit
HEPA filter	High Efficiency Particulate Air filter
CSSD	Central Sterilisation & Supply Department

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Standard Precautions to be followed by All (Employees, Patients and Attenders)

1. Hand hygiene
2. Physical distancing
3. Surface disinfection and minimal contact of surfaces
4. Face mask at all times
5. To use protective equipment as per the risk level
6. To provide all equipment that have a chin/head rest, with breath shield
7. Minimal verbal communication

Initial Patient Screening & Triaging

1. Screening of temperature, history of travel and contact from both patient and attenders should be undertaken at point of entry to identify suspects. Suspects should be advised to seek medical opinion and come after 2 weeks if cleared by the physician.
2. COVID-19 Suspects with vision threatening emergencies can be advised to go to higher centres.
3. It is essential to maintain a list of patients and attenders on a daily basis with special mention of COVID-19 positive or suspects which need to be reported to local health authority. Advisable to ask the patients to download and log on to Aarogya Setu app.
4. COVID-19 consent form should be taken from the patient and the attender.
5. Only one attender per patient is recommended.

At Outpatient Department

1. With all standard precautions patients are examined after refraction with minimal touch as per protocols.
2. Patients diagnosed with cataract and advised surgery will undergo IOP measurement preferably by I-care tonometer or with Applanation Tonometry with full precautions. Avoid using Non-Contact Tonometry (NCT) for IOP measurement.

3. Nasolacrimal duct obstruction to be ruled out by fluorescein disappearance method. If nasolacrimal duct syringing is to be done, it should be done after applying 5% Povidone-iodine (3 min contact time) and staff wearing face mask and face shield.
4. BP to be recorded with electronic apparatus, blood sugar evaluated & pulse oximetry to be recorded.
5. If co-morbidities like cardiac, pulmonary, uncontrolled Diabetes Mellitus, Hypertension or any other systemic diseases are present; a fitness certificate from the physician should be sought and an X-ray of the chest, ECG, complete blood count to be done based on their advice.
6. Biometry is ideal by optical method with all necessary precautions for both employee and patient and following complete cleaning methods. If ultrasound biometry is done, the probe is cleaned after each use with alcoholic (70%) swabs.
7. COVID-19 tests as per current governmental guidelines need not be done for surgery. If available and if patient is willing then it can be done.

Counselling

1. With standard precautions counselling of patient and attender is done by the doctor or any trained personnel
2. Points to be discussed
 - a. About the cataract and surgery
 - b. Only one attender to accompany with minimal items for day care
 - c. Instruction regarding need for hand hygiene, mask, physical distancing, minimal contact and minimal movement in hospital.
3. Surgical consent form and a separate consent regarding the risks of COVID-19 from patient with at least one attender as witness and to be signed by the doctor with seal, date and time.
4. Scheduling is done and patient is advised to report 1 hour before scheduled surgery with advice to apply topical antibiotics as per protocol.
5. To bring their topical and systemic medicines & records when they come.

6. To bring fitness for surgery if advised and details of systemic investigations to be brought along.

On the Day of Surgery on Arrival

1. Temperature screening and COVID-19 questionnaire to be filled. If found fit making sure they have their mask on, the patient will be directed or escorted to the day care / waiting room.
2. Apply antibiotics asking the patient to hold lower lid or the lower lid can be pulled with a bud.
3. Dilation is started 30 minutes before shifting to OT.
4. Avoid any contact investigations (eg. Applanation Tonometry).
5. Ask them to wash hands, feet and face.
6. An OT gown or a single use reusable gown is given to the patient. Even if the patient is allowed to wear their own dress, the OT gown or single use reusable gown should be worn on top.

Shifting to Operation Theatre

1. After call from OT when the surgical team is ready.
2. Hand hygiene to be followed while handing case sheet between staff and not to hand over any document to the patients.
3. Attender to stay in the ward/ waiting area.

On Entry into Operation Theatre

1. A new 3-ply surgical mask is given to the patient to be worn.
2. Cap and shoe cover are donned.
3. Hand cleaned with sanitizer.

On Entry into Operating Room

1. Povidone-iodine 10% is used for periorbital skin cleaning.
2. Povidone-iodine 5% applied to the conjunctival sac for an optimal period of 3 minutes. Povidone-iodine both 10% and 5% are virucidal and makes the procedure safer for the surgeon and the OT staff.
3. If phacoemulsification is to be done, topical anaesthesia can be considered where possible, peribulbar/ retrobulbar/ subtenon's block is to be given with staff wearing appropriate PPE.
4. The mask can be pulled down slightly below the nose if the patient is not comfortable just before draping.
5. Drape - make sure the drape near nasal side is strictly secured with adhesive sticking.
6. Pulse oximetry & BP monitoring is to be done.
7. Ideally instrument set is opened after draping (complete sterile set for each case).
8. There should never be a cross-over of instruments from one case to another.
9. All sterile items and consumables needed should be shifted to the OT before surgery is started, to avoid unnecessary opening of door during surgery.
10. Ideally for each surgery only the surgeon, assisting sister, circulating sister and a standby sister (if required) should be inside the OT.
11. After time out, surgery as per regular protocol is undertaken which should be swift and effective.
12. No unnecessary talking during the procedure.
13. Cataract surgery including phacoemulsification is considered as a low risk surgery.
14. A sterile phaco tip and sleeve to be used for each case.

15. Filling the anterior chamber with viscoelastic will ensure that aqueous is replaced during phaco. To plan ahead regarding need for consumables in the event of a complication such as posterior capsule rent, so that if vitrectomy is required it can be done without much delay.
16. After each surgery, the surgical set is removed before undraping.
17. The eye patch is placed and patient is shifted out of OT.

In-between Cases

1. Take the required time to complete in between surgeries cleaning & disinfection protocols.
2. Complete cleaning of all equipment & surfaces (patient table, OT trolley, surgeon chair, door knobs etc.) with disinfectant solution. (Sodium hypochlorite 1%, Lysol, and Alcohol 70% are effective.)
3. BMW to be removed as per BMW 2018 modification of 2016 rules making sure segregation is at the source, packed and removed after each case.
4. Team prepares for the next case.

For Operation Theatres with Air Conditioning Units (HEPA filter and laminar air flow system)

1. Air handling units (AHU) should be functional in-between cases.
2. Temperature between 24°C and 30°C & humidity between 50% and 60%. Around 55% RH (Relative Humidity) is ideal.
3. Maximize air changes per hour to be at least 30 and fresh air intake can be maximised with engineering controls.
4. Doffing should not be done inside the OT and ideally done in separate doffing room with exhausts since HEPA filtered system have a positive pressure ventilation. This room is cleaned after every case.

For Operation Theatres with Split Air Conditioners

1. Temperature 24°C -30°C and if adjustable and recordable a humidity of 50% to 60% RH to be maintained.
2. Air filters are removed, taken out of OR with use of optimal PPE and cleaned daily before starting the end of day cleaning.

In the Day Care Ward

1. On receiving the patient, Pulse, O₂ saturation and BP to be monitored hourly.
2. Medication and post-op instructions to be given.
3. Safety measures advised.
4. Review date depending on scheduling policy of the hospital.
5. Can be discharged after 2 hours after recording vitals.

Patient's Room/ Day Care Room Cleaning

1. Proper sanitization and cleaning to be done including emptying bins before admission and after discharge making sure all contact surfaces are also cleaned.
2. Ideal to do cleaning also when the patient is shifted for surgery to OT.

What Remains Same

1. Perioperative antibiotics
2. Autoclaving protocols
3. Validations and surveillance
4. Linen management
5. BMW management with segregation at source and colour coding.

Cleaning and Disinfection agents preferred are 1% Sodium hypochlorite, 70% Alcohol & Lysol. Whatever cleaning protocols currently being used in OTs are properly validated and surveillance is done periodically without any adverse reports it can be carried out making sure to clean all exposed surfaces as in between and end of day protocols.

Personal Protective Equipment in Operation Theatre

OT – Surgeon	<p>Hand wash</p> <p>Regular theatre dress, cap, foot cover or OT foot wear</p> <p>Respirator / 3-ply surgical mask</p> <p>Surgical scrub</p> <p>Sterile gown</p> <p>Gloves</p>
Assisting Sister	<p>Hand wash</p> <p>Regular theatre dress, cap, foot cover or OT foot wear</p> <p>Respirator / 3-ply surgical mask</p> <p>Surgical scrub</p> <p>Sterile gown</p> <p>Gloves</p>
Doctor Administering block	<p>Regular theatre dress, cap, foot cover or OT foot wear</p> <p>Hand wash</p> <p>3-ply surgical mask</p> <p>Face shield or Goggles</p> <p>Gloves</p>
Running / Standby person	<p>Regular theatre dress, cap, foot cover or OT foot wear</p> <p>Hand wash</p> <p>3-ply surgical mask</p> <p>Hand wash</p> <p>Gloves</p>
Patient @ Operating Room	<p>Clean Dress / OT dress, cap, foot cover</p> <p>Hand wash</p> <p>Fresh 3-ply surgical mask</p>
CSSD	<p>Regular theatre dress, cap, foot cover or OT foot wear</p> <p>Hand wash</p> <p>3-ply surgical mask</p> <p>Face shield</p>

Various forms and COVID-19 related advisories from TNOA are available at: <https://tnoa.info/covid-19/>

References

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2. Guidelines from Ministry of health and family welfare, Govt. of India on rational use of PPE.
3. Infection Prevention & Control for COVID-19 from NCDC on 3/4/2020
4. ISHRAE guidelines on air conditioning and ventilation
5. Operational guidelines in COVID-19 times from All India Ophthalmic Society on 11/5/2020
6. Hospital Infection Control related elements from NABH Eye Care Organizations 1st Edition
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