THE ASSOCIATION OF OTOLARYNGOLOGISTS OF INDIA

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Advisory for Safe ENT Practice during Covid-19 Pandemic

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The AOI Governing Body has summarised this information to serve as a guidance for its members during this Pandemic crisis. This is based on information available at the time of writing and the association recognises that the situation is evolving rapidly, so all these recommendations may change. The guidance included in this document does not replace regular standards of care, nor do they replace the application of clinical judgement to each individual presentation, nor variations due to jurisdiction or facility type.

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THE ASSOCIATION OF OTOLARYNGOLOGISTS OF INDIA ★ AOI HEAD OFFICE

Dr.M.B.Bharathi
AOI President Elect

Dr.Yogesh Dabholkar
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OPD PROTOCOLS

Individuals who should preferably avoid practicing in this Covid-19 Scenario:

- All ENT Doctors above the age of 65 years
- Paramedical and Nursing Staff above 65 years
- Individuals with Comorbid conditions like Diabetes, Hypertension, Cardiac ailments, Chronic Liver and Kidney ailments, COPD, Asthma, Malignancies and those on Chemotherapy at present.
- Pregnant doctors and healthcare workers

General Instructions for ENT OPD Practice:

- Restrict OPD Consultation timings and by seeing patients with prior appointments only. Refrain from seeing walk-in patients.
- Keep the hospital door open throughout the OPD hours.
- Detailed screening history and temperature testing to be done by the Nursing staff before registration.
- Address and contact details of every patient to be noted.
- All Fever, Cough and Cold cases to be referred to the nearest Government/ Municipal hospitals as per the latest notifications in your region
- Only 1 adult patient (preferably without a relative / accompanying person) enters the hospital /reception area at a time
- Hand Sanitizer to be kept at the entrance of the hospital/clinic for each individuals use before entering.
- Every patient to be allowed inside only if he/she is wearing a face mask as it has been made mandatory by most city authorities.
- Maintain social distancing between the staff and patient
- Maintain adequate distancing between patients.
- Patient should be instructed not to touch any furniture, table tops, door handles etc during the registration process
- All Doctors and health workers are expected to wear basic safety measures like wearing a 3 ply surgical face mask (N95 preferably),

Goggles or Eye wear, Face shield, Disposable examination gloves, OT gown (if PPE not available) and shoe covers.

- Use Hand Sanitizers after consulting or examining each patient
- No Nasal / Oral examinations to be conducted as far as possible
- No OPD Endoscopies, Indirect Laryngoscopy should be done
- Any Endoscopy if required should be done only using PPEs only.
- Avoid using AC in the consulting room. Well ventilated room with consulting door kept open always is advisable.
- All patients to wash their hands before entering the consulting room.
- Triage area in OPD to be maintained
- Avoid the use of mobile phones and laptops
- Keep minimal equipment in the consulting room. Remove unnecessary things.
- Frequent cleaning of door knobs and tables.
- Accept digital payments like payTm/card/NEFT as far as possible.
- Sanitise ur spectacles, eyewear, mobiles etc after OPD hours.
- Sanitization / Fumigation after OPD hours.

Patients who shouldn't be seen in the OPD:

- Domestic / International travel to Covid affected regions in last 1 month
- H/o Fever
- H/o Dry Cough
- H/o Breathlessness
- H/o Sore throat
- H/o recent onset Anosmia
- H/o change in taste
- H/o contact / exposure to any suspected Covid positive patient

Declaration Form format to be taken from all patients:
(Sample format)

Name of the Hospital / Clinic:
Name of the Doctor:
Date & Time of Appointment:

Declaration

Due to this ongoing Covid Lockdown scenario, I have myself voluntarily come to the hospital/clinic to get treated for my Emergency / Acute ENT problem.

I am not aware whether I am an asymptomatic carrier or an undiagnosed patient of Covid-19 at the moment. Since I can unknowingly transmit the viral infection to the doctors or hospital staff, I declare that I will adhere to all the precautions and protocols laid down.

I am also aware that I may unfortunately get affected by the Covid-19 infection from the hospital staff or doctors during the course of my treatment there inspite of them having adhered to all the acceptable standards of care. In such an eventuality of this happening to me or the person accompanying me, I will not hold the doctors and any hospital staff responsible for this.

Patients Name:
Mobile No:
Address:
Email id:
vehicle no:

Patients Signature:

PRESURGICAL PROTOCOLS:

1. All routine surgeries should be deferred as per the government notifications. Only emergencies cases should be operated.
2. All patients to be treated as a suspected Covid positive case unless proven otherwise.
3. All mandatory precautions should be taken with use of N 95 and PPE right from OPD evaluation, preoperative, intraoperative as well as post operative care to protect not only patients/relatives but also all healthcare providers at risk.
4. Consent: A well framed consent should be discussed with patient and relatives covering a clear statement that hospital as well as health care providers will not be responsible for the risk of COVID-19 exposure and the potential consequences.
5. Pre-Operative Investigations:
   - All routine investigations for general anesthesia.
   - RT-PCR Testing for Novel Coronavirus is a Reverse Transcriptase Polymerase Chain Reaction testing method wherein swabs are taken from the Nasopharynx/Oropharynx
   - CBC Findings: COVID-19 can cause Leukocytosis with low lymphocyte counts, low platelet counts, low hemoglobin, abnormal liver function and raised CRP.
   - Serum ferritin
   - X-ray chest PA view - mandatory in all cases.
   - CT scan of thorax done in suspected cases.
6. An OT with negative pressure environment located at a corner of the operating complex, with a separate access, is designated for all confirmed or suspected COVID -19 cases wherever possible.
7. Preoperative surgical site preparation should be done with extreme care taking all universal precautions who so ever does.
8. The patient shifting staff should be well versed with all necessary precautions.
9. Time lag of atleast 3 hours between two surgeries & OT to be cleaned or sanitized before the next case.
10. If operating on a proven COVID-19 positive case, government authorities should be notified and the protocols should be adhered to.
(Source: WHO, CDC, ACS, Stanford and ICMR guidelines)

SURGICAL PROTOCOLS FOR ENT PROCEDURES AND SURGERIES:

- Reduce the operative workload to only emergency procedures.
- The inpatient, emergency department, and outpatient otolaryngology procedures should be handled differently during the pandemic. Most of the routine otolaryngology and head and neck operative procedures are high risk owing to exposure of airway and mucosal surfaces and the possibility of generating aerosols.
- Adequate education of health care workers is essential.

Procedures Commonly Performed Outside the Operating Room considered high risk for physician in COVID pandemic

1. Routine suctioning of patients with a tracheotomy.
2. Nasal packing placement, removal, or manipulation.
3. Drainage of peritonsillar abscesses. Consider avoiding through the use of antibiotic management or needle drainage instead of open drainage.
4. Foreign body removal: Deferring may not be possible. If the location is such that it will be particularly challenging to access in an awake patient or if the individual is particularly intolerant of manipulation, performing the removal under general anaesthesia may be necessary.

Operative Procedures — General Considerations

1. COVID-19 Status: If possible, determine the COVID-19 status of the patient before- hand. If a patient test positive, a careful assessment of risk to the patient and health care workers should be performed by a multidisciplinary team before the operation is recommended. Operating on mucosal surfaces in a patient who is actively infected generates a great risk for the entire operating room and recovery units and may compromise the patient's ability to recover from the infection.

2. Operating Room Setting: High-risk operations or operations in patients with known COVID-19 should be performed in a designated operating room with **negative pressures**. Unprotected personnel should not be allowed in a room where an aerosol-generating procedure is being or has been conducted. If a patient is known or suspected to have COVID-19, appropriate PPE must be worn by all.

3. Ultra-High-Risk Surgeries
    - Any procedures on the glottis/airway, oropharynx, nasopharynx, mastoid, or sinuses.
    - Any ENT/OMFS procedures using cautery, laser, drill or saw use within airway/oral cavity.
    - Any procedures utilizing operative rigid laryngoscopy or rigid bronchoscopy
    - Any procedures on the subglottic airway involving incision of the airway (tracheostomy), dilation of the airway, laser or electrocautery debridement of the airway.
      (Any transcutaneous only procedure is classified as low risk)

    A list of AGP (Aerosol Generating Procedures) considered Ultra high risk:
    - Intubation
    - Extubation
    - Office-based nasal and laryngeal endoscopy
    - Bronchoscopy
    - Gastrointestinal endoscopy
    - I&D of peritonsillar abscess
    - Placement of nasal packing
    - Foreign body management in the nose or airway
    - Tracheostomy & tracheostomy care
    - Powered instrumentation in mucosal head and neck surgery
    - Endoscopic Sinus surgery
    - Mastoid surgery

4. High-Risk Procedures:
    - Any operation that involves nasal mucosal, oral, pharyngeal, and pulmonary secretions. (Considering the high viral titres in these surfaces)
    - Use of energy devices used for haemostasis and dissection such as electrocautery, powered devices (e.g. drills, microdebriders, harmonic scalpel, etc.)

General considerations for each Ultra High risk procedures:

1) Patients undergoing these procedures whether high risk or ultra-high-risk for aerosol generation should get mandatory laboratory testing for COVID-19.

General Considerations for each of these Ultra high-risk procedures:

1) Patients undergoing these procedures whether high risk or ultra-high-risk for aerosol generation should get mandatory laboratory testing for COVID-19.
2)For COVID negative patient with testing within 24-72 hours who has self-isolated, contact local institutional committee for use of PPE
3) All other, COVID +, or unknown COVID status emergency procedure - Proceed as if positive.
4) Minimize the number of healthcare personnel present throughout the procedure.

Specific Guidelines:

An AGP procedure: COVID Positive, or COVID unknown emergent:

1) Scrub, circulator nurse can set up as normal
2) Patient transferred to OT table.
3) Anaesthetist and Circulator nurse dons augmented PPE (Gown, double glove, CAPR or PAPR or N-95 if testing negative and no respirators available) with assistance from scrub.
4) Scrub, Circulator, & surgeon scrub per usual and then don augmented PPE in the room with assistance from anaesthetist and Circulator. This step to be completed prior to intubation.

ENT Surgeon will need to be in the room for intubation for most procedures and designated airway cases.

5) Intubation and Extubation: In all operations, coordination with the anaesthesia team is critical. It is advisable that during intubation, all nonessential staff leave the room and only return after the airway is secured. Additionally, all non-essential staff should be out of the room during extubation. Anybody who is present should maintain appropriate PPE. In some centres, an interval equivalent to known air exchange times for that operating room is practiced before other personnel are allowed to enter. Jet ventilation procedures pose a particularly high risk and should be performed only under absolute necessity and with ap- propriate PPE, preferably in a negative-pressure room.

6) Procedure proceeds as normal with the exception of staff remaining in the room for the duration of the case and minimizing opening of OR doors.
- The surgery starts immediately with all staff in the room in appropriate PPE (no 15 min delay needed).
- See site specific recommendations below.
- Most Experienced Surgeon performs the procedure

7) After the procedure is completed suction canisters are turned off and prepped for change to allow for egress.
8) Patient and team must remain in the room 15 minutes post AGP or extubation to allow for egress and for 99% clearance in OT rooms.
9) Doffing of PPE and equipment in the room
10) Biomedical waste disposal to be done with caution
11) Transport: a) If patient COVID test is positive or unknown then transport with COVID PPE (N-95, Gown, gloves, face shield). If patient is intubated, use a viral filter on Ambu bag. b) If patient negative and asymptomatic then standard transport (face mask, gloves)

Site specific modifications on the above:

1) Nose and sinus and oral cavity: - It may be considered prior to cautery in the nose a tracheal suction catheter with bone wax covering the finger hole is placed in the contralateral nostril on a second suction to direct and control the plume. A similar principle may be followed for cautery in oral cavity.

2) Ear Surgery: - Drilling through the mastoid creates droplets and aerosols in significant clouds that, if the virus is present, could risk infecting everyone in the operating room environment. As contaminated mists harbour viable virus for several hours, especially in enclosed spaces, caution is warranted. Mastoidectomy therefore is considered a high-risk procedure. Ideally, any patient undergoing any ear surgery should be tested for COVID-19 preoperatively. If a patient is positive, surgery should be delayed until the patient has cleared the disease.

3) Management of Facial Trauma: - After following the trauma triage protocol, if assessment and treatment of facial trauma is needed, our recommendation is to treat patients of unknown COVID-19 status as

COVID-19 positive and proceed with adequate PPE. Lacerations that involve mucosal surfaces should be treated as high risk. For injuries that require operative intervention (for example, reduction of fractures), the infection status of the patient should be confirmed first and then definitive treatment initiated if at all possible. In areas with significant shortage of medical capacity and personnel, nonoperative approaches should be considered as much as medically acceptable.

4) Airway/ Tracheostomy: - Performing tracheostomy on patients with suspected or con- firmed COVID-19 imposes unique challenges on not only for otolaryngologists but the entire health care team. In nonemergency situations, all cases should be reviewed by a multidisciplinary team, and the risks vs benefits of the procedure for the patient and the entire health care team should be carefully assessed. Additionally, a detailed post-procedure care plan should be established to ascertain the protection of other patients and health care workers. In general, most tracheostomy procedures should be avoided or delayed (even beyond 14 days) because of the high infectious risks of the procedure and subsequent care until such time as the acute phase of infection has passed, when the likelihood of recovery is high, and when ventilator weaning has become the primary goal of care. Avoiding early tracheostomy in patients with COVID-19 is suggested because of the higher viral load that may be present at this time.

Considerations for tracheostomy:

- Select the patients carefully. If the tracheostomy is assessed as difficult because of anatomy, history, comorbidities, or other factors, consider postponing the procedure.
- Consider percutaneous dilatational tracheostomy if the patient's anatomy and proceduralist expertise allow it to be done safely with minimal or no bronchoscopy, endotracheal suctioning, and disruption of the ventilator circuit.
- Provide adequate sedation including paralysis to eliminate the risk of coughing during the procedure. Ventilation should be paused (apnea) at end-expiration when the trachea is entered and any time the ventilation circuit is disconnected.

- Choose a non-fenestrated, cuffed, tracheostomy tube on the smaller side to make the tracheostomy hole smaller overall. Keep the cuff inflated to limit the spread of virus through the upper airway.
- Perform tracheostomy suctioning using a closed suction system with a viral filter.
- Use a heat moisture exchanger device instead of tracheostomy collar during weaning to prevent virus spread or reinfection of patients.
- Avoid changing the tracheostomy tube until viral load is as low as possible.

SUMMARY OF ENT AND PROCEDURE RECOMMENDATIONS:

Risk and definition	Patient wears	Clinician/staff wear
Aerosol-generating interventional procedures Procedures including but not limited to the following: Intubation, extubation, office-based nasal and endoscopy, drainage of peritonsillar abscess, placement of nasal packing, foreign body management in the nose or airway, tracheostomy, tracheostomy care, powered instrumentation in mucosal head and neck surgery, possibly laparoscopic surgery		
High risk to clinician: consider delaying or discussing the following: • Patients with active SARS-CoV-2 infection • Patients with influenzalike symptoms • Patients under evaluation for SARS-CoV-2 infection	Surgical mask	PAPR or single-use N95 mask and goggles or face shield • Gown • Double gloves
Low risk to clinician:	Nothing	• N95 mask and eye protection (may be appropriate to reuse;

Patients who are asymptomatic and untested or SARS-CoV-2 negative in 48 h preceding surgery If possible, test patients within 48 h of procedure		must use face shield to allow reuse) • If unavailable, surgical mask with goggles or face shield • Gown • Double gloves
Non–aerosol-generating interventional procedures Soft tissue surgery exposes blood, which can have a viral count, but unless the blood is aerosolized by the use of energy devices, it would be expected to be lower risk. Suctioning away smoke and aerosolized tissue is recommended. To our knowledge, the infectiousness of aerosolized blood with SARS-CoV-2 is not yet known.		
High risk to clinician: consider delaying or discussing in: • Patients with active SARS-CoV-2 infection • Patients with influenzalike symptoms • Patients under evaluation for SARS-CoV-2 infection Low risk to clinician: patients who are asymptomatic or SARS-CoV-2 negative in last 48 h	Surgical mask Nothing	• Single-use N95 mask • Goggles or face shield • Gown • Gloves • Surgical mask • Goggles or face shield • Gown • Gloves

Abbreviations: PAPR, powered air-purifying respirator; SARS, severe acute respiratory syndrome; SARS-CoV-2, SARS coronavirus 2.

ADVISORY FOR MANAGEMENT OF ENT EMERGENCIES:

EPISTAXIS :

- Aim should be to contol/stop the epistaxis without unnecessary indoor admission while ensuring the safety of patients and staff is not compromised.

- All patients to be considered as if COVID-19 positive and Full PPE should be worn by all the healthcare personnel involved in the treatment
- Conservative treatment with Nasal pressure and/or packing and control of comorbidities should be attempted immediately.
- ENT follow-up on an SOS basis
- If Epistaxis persists: Bilateral anterior or posterior Nasal packing with admission
- Surgical Intervention to be avoided unless necessary.

FOREIGN BODIES REMOVAL:

- Deferring their removal may not be possible. All proper PPes and precautions should be taken if the procedure is done in the OPD setting.
- If the location is such that it will be particularly challenging to access in an awake patient or if the individual is particularly intolerant of manipulation, performing the removal under general anaesthesia may be necessary.

PERIORBITAL ABSCESS :

- Where the vision is at risk and conservative measures have failed, an external approach may be preferred over the Endoscopic approach.

NASAL BONE FRACTURES:

- In undisplaced fractures, treatment should be conservative. Intervention uunder general anaesthesia recommended only in case of a communited displaced fracture or a nasal septal haematoma

ACUTE MASTOIDITIS

- Acute mastoiditis should be managed medically, and if possible by needle aspiration of a subperiosteal abscess
- CT scan to be done only if symptoms progress despite conservative management.

NECK ABSCESS

- Infective neck masses should be managed as outpatients as far as it is possible to.
- Progressively enlarging cervical or retropharyngeal prulent collections may require surgical treatment with full PPE in the OT.

IDIOPATHIC FACIAL PARESIS/PALSY Or SUDDEN ONSET SENSORINEURAL HEARING LOSS Or MENIERE'S DISEASE :

Current literature references suggest that high dose steroid use, whether to manage Covid 19 infection or to treat an unrelated condition, may be associated with a worse outcome. The use of high dose oral steroids is therefore not recommended to treat either Meniere's Disease or Sudden Sensorineural Hearing Loss (SSNHL). The systemic dose of steroid following intratympanic treatment is significantly lower than that of oral treatment, and it is therefore likely that the impact on COVID-19 outcomes will be less. It is therefore preferable to use intra-tympanic steroid to treat these conditions. There is, however, no evidence base for this assumption, and the potential impact on outcome of COVID-19 infection following intratympanic steroid use should be discussed with the patient and informed consent obtained prior to proceeding. Whether or not to proceed should be decided on a case-by-case basis.

If undertaking intra-tympanic treatments, it has been usual practice to ask the patient to spit and not swallow for 20 minutes after the injection. This should be avoided during the COVID-19 pandemic as spitting generates aerosol containing viruses.

INTENSIVE CARE UNIT/RECOVERY:

- No entry to any relatives
- All healthcare staff should wear full PPE
- Barrier nursing techniques to observed
- Shifting of patients in and out to be done by two teams: One outside and one inside.
- Biomedical waste disposal with all care as per the local municipal regulations

- Aerosol generating procedures to be minimized or done using special techniques
- and/or equipment with full PPE and N 95 respirator: should be done in a separate
- room adjacent, to prevent exposure of the entire ICU.

POST SURGICAL CARE:

Due care to be taken while doing external dressings and Nasal endoscopic suctioning

TRACHEOSTOMY:

To be evaluated in a multidisciplinary approach with a consensus among specialists regarding potential for clinical benefit.

- Avoid if possible, especially if there is a reversible cause for airway obstruction
- Avoid use of high flow oxygen
- Full PPE according to the hospital guideline
- Arrange senior staff to do in day time

