ADVISORY FOR SAFE EAR, NOSE & THROAT (ENT) PRACTICE DURING COVID PANDEMIC 2020

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श्री अध्यक्षज्यू
सोसाईटी अफ ओटोल्यारिंगोलोजी अफ नेपाल
काठमाडौं ।

विषय : निर्देशिका अनुमोदन बारे ।

उपरोक्त विषयमा मिति २०७७ जेठ २० गते मंगलबार बसेको नेपाल मेडिकल काउन्सिलको पूर्णबैठकको निर्णयानुसार त्यस एसोसिएसनबाट निर्माण भई यस काउन्सिलमा प्रस्तुत भएको ADVISORY FOR SAFE EAR, NOSE & THROAT (ENT) PRACTICE DURING COVID PANDEMIC 2020 लाई प्रस्तुत गरिएको ढाँचा र उल्लेखित विवरण बमोजिम अनुमोदन गरिएको जानकारी गराउँदछु ।

डा. कृष्णप्रसाद अधिकारी
रजिष्ट्रार

HOW TO START PRACTICE AGAIN?

ENT Doctors who should be more careful practicing in this COVID-19 Pandemic Scenario

- Age more than 65
- Doctors with comorbidity like diabetes mellitus, hypertension, cardiac ailments, chronic liver and kidney ailments, chronic obstructive pulmonary disease (COPD), asthma and malignancies.

OUT PATIENT DEPARTMENT SERVICE

1. Before starting out patient department (OPD), arrange a meeting with your concerned staffs including Administrator, nurses, receptionists and security guards.
    - Train security guards/helpers to screen COVID symptoms & send suspected patients to COVID Clinic.
    - Train receptionist also to screen the COVID Symptoms (use printed questionnaire if possible)
    - Place a **clear sign board** requesting patients to maintain at least one meter distance while waiting for registration and also between patients while waiting in the waiting room.
    - Avoid overcrowding in waiting area. Restrict number of OPD patients at a time. Better have time slots. Only one visitor should be allowed with each patient in waiting area
    - Place another **clear sign board** requesting the patients to inform beforehand, if he/she is suffering from fever or he/she has come from outside Nepal within a period of eight weeks or he/she has contact history with people who have come from abroad, at the time of registration itself
    - All non-essential hospital visitors including medical representatives should be discouraged.
    - Encourage to wipe all door handles, reception desk, tables with alcohol every two hours.
    - Instruct staffs to clean the floor, waiting room chairs and benches at least twice a day with alcohol containing material or with Virex or Lysol.
    - Avoid consultation in air conditioned rooms. Well ventilated room with consulting door kept open always is advisable
    - Patients who should not be examined in ear nose and throat (ENT) OPD (staffs must be able to screen these)
        - Domestic and/or international travel to COVID affected regions in last two months
        - History of Fever (remember- normal body temperature does not exclude infection)
        - History of dry cough
        - History of breathlessness
        - History of sore throat
        - History of recent onset anosmia
        - History of change in taste
        - History of contact / exposure to any suspected Covid-19 positive patient
2. Restrict OPD Consultation timings and try to see patients with prior appointments only. Train staff to screen the patients on telephone while they make appointments. Refrain from seeing walk-in patients (if possible)

3. Arrange for a wash basin with soap and water or hand sanitizer outside hospital or clinic. All patients and bystanders should only be allowed to enter the hospital or clinic only after thorough hand washing and/or after the use of hand sanitizer.
4. Encourage patients not to visit hospital, for unnecessary follow up. Arrange follow up via telephone.
5. Patient should be instructed not to touch any furniture, table tops, door handles etc during the registration process
6. Keep the OPD/clinic door open whenever possible.
7. Avoid keeping any visitor inside the check-up room unless required.

OPD set up

Protection of health personnel

- Maintain social distance between patient & nurse/registration desk staffs and adequate distance between patients
- Within the hospital/clinic premises staff must use at least a layered face mask with visor, full sleeved apron/gown and double disposable gloves. Screening staff should be provided with N95 mask or equivalent and visor .
- Every patient to be allowed inside only if he/she is wearing a face mask.
- Please train your staffs how to wear and remove mask and gloves, especially reusables.

All patients should be presumed to be positive.

Our OPD should not be looking the same as it was before COVID-19

- Keep minimal equipment in the consulting room. Remove unnecessary things.
- Let's have some short of barrier between patient and ourselves ,e.g. transparent plastic hanging from roof like curtain.
- Minimum one-meter distance between patient and ourselves while taking history
- Increase the number of OPD instrument in the examination room so that autoclaving once a day would be better rather than boiling and reusing the same instrument same day.

Our Dress

- Wear scrub dress (don't use same dress that you have come from home).
- Use customized /local made/branded PPE over the scrub dress.
- Use N-95 mask and simple surgical mask over that. Surgical mask can be thrown after our clinic and N-95 can be reused for next day till we have luxury of changing it every day.
- Use protective goggles and/or visor
- Use surgical gloves first and then working gloves over it, which could be changed as required.
- Try using covered shoes/boots

Examination Protocol

- Wash your hands with soap water/sanitizer before and after examining patients.
- As far as possible try to treat the patient symptomatically without looking into Ear, Nose and Throat.
- Avoid using tongue depressors/nasal examination without universal precautions. *(always keep in mind that COVID-19 virus load is maximum in Nasal cavity, Nasopharynx and all over the mucosal surface of entire respiratory tract.)*
- Ask your staff to frequently clean your OPD table, patient chairs and door knobs with alcohol containing material.

- You yourself and your staffs (nurses/helping staffs) must sanitize your mobiles and spectacles regularly.

OPD procedures: considered high risk in COVID pandemic *(Aerosol generating OPD procedures)*

Full PPE (personal protective equipment) should be worn by all the healthcare personnel while performing the following procedures:

1. Flexible ENT endoscopy
   ENT endoscopy is considered one of the aerosol-generating procedures. Avoid this procedure until and unless it is a must. Moreover, nose and nasopharynx have been shown to be a reservoir of high concentration of the SARS-CoV-2 virus, and after manipulation, viruses have been shown to be airborne for 3 hours or more.
   If you have to perform endoscopy, take following precautions:
   a. Use cotton pledge soaked in xylocaine and oxymetazoline solution or use lignocaine ointment with cotton swab. DO NOT USE SPRAY as it may cause sneezing or coughing.
   b. Keep the nasal speculum and nasal packing forceps in separate kidney tray, use same instrument to take out the cotton pledge and send for proper disinfection.
   c. Endoscopy should be carried out by video monitoring if possible, rather than direct viewing through eyepiece.
   d. After completion of examination, whole endoscope (not only the tip) must be appropriately handled and cleaned with alcohol-based solution and keep in the Cidex. After cleaning the endoscope, the outer gloves should be removed.
   e. If you think patient is suspected of COVID, DON'T DO endoscopy for another 3 hour and disinfect the room before doing next endoscopy.
2. Routine suctioning of tracheostomized patients.
3. Nasal packing placement, removal, or manipulation.
4. Drainage of peritonsillar abscesses.
5. Foreign body removal: 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 anesthesia may be necessary.
6. During micro-suction, particularly with *fenestrated suction*. The risk of COVID-19 transmission with micro-suction is, however, low particularly with wax clearance in the absence of inflammation.
7. OPD based biopsy, injection in upper aerodigestive tract. (These procedures should be delayed if possible.)
8. Nebulization
10. Obtaining nasopharyngeal or oropharyngeal swab

EMERGENCY CASES

- Do Triage
- Verify the nature of the emergency from ~~a~~ history and maintain social distance, examine only one person in a room, ~~a~~ patients must use surgical mask.
- The clinician should avoid oral and nasal examination, if applicable.
- If the patient has a confirmed emergency, clinician should wear PPE; N-95 mask under their surgical mask/visor, gloves so that complete examination can be done being prepared for Aerosol Generating Procedure (AGP).

Epistaxis

- Aim should be to control/stop the epistaxis without indoor admission as far as possible without compromising the safety of patients and staffs.
- Conservative treatment with nasal pressure and/or packing and control of comorbidities should be attempted. ENT follow-up should be done as and when necessary.
- If Epistaxis persists, admit the patient and do bilateral anterior or posterior nasal packing with bilaminar/trilaminar nasal catheter.
- Surgical Intervention to be avoided unless necessary.

Foreign bodies removal

- Proper PPE and precautions should be taken if the procedure is done in the OPD setting.

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 under general anaesthesia recommended only in case of a communited displaced fracture.

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 possible.
- If incision and drainage needed, proper PPE and precautions should be taken.

Sudden SNHL

- Diagnosis can be made on clinical finding if hearing test is not available and can be managed with oral medication.

Emergency surgical protocols

1. All routine surgeries should be deferred. Only emergency 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. Pre-operative investigations:
    - All routine investigations for general anaesthesia.

- RT-PCR (real time polymerase chain reaction) testing for novel coronavirus, if possible, as now it's being available.
- Complete blood count (CBC) Findings: COVID-19 can cause leucocytosis with low lymphocyte counts, low platelet counts, low haemoglobin, abnormal liver function and raised CRP (c-reactive protein).
- Serum ferritin.
- Chest x-ray PA view is mandatory in all cases.
- CT scan of thorax done in suspected cases.

5. The patient shifting staff should be well versed with all necessary precautions.
6. Time lag of at least 3 hours between two surgeries & OT (operation theatre) to be cleaned or sanitized before the next case.
7. 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 guidelines)

Other surgical protocols

- 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.
- COVID-19 Status: If possible, determine the COVID-19 status of the patient. 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.
- 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 if possible . 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.
- In procedures involving possibility of Aerosol Generation full Personal Protective Equipment (PPE) must be used despite COVID positive/negative status.
    - N-95 mask
    - Goggles or visor
    - Gloves (double layers)
    - Water resistant standard disposable gowns
    - Cap: Regular disposable and water resistant over that (local made)

Please remember to cover your entire face including hairs by water resistant cover

CATEGORY OF PROCEDURES

Very high-risk procedure/surgeries

- Any procedures on airway, oropharynx, nasopharynx, mastoid, or sinuses.
- Any ENT 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 procedure is classified as low risk). Few examples are
  - Intubation
  - Extubation
  - Tracheostomy and open suctioning
  - Bronchoscopy
  - Foreign body removal from oral cavity, oropharynx using esophagoscopy
  - Surgery in which high-speed devices are used like microdebrider
  - Endoscopic sinus surgery
  - Mastoid surgery
- Things that must be done for each of these ultra-high-risk procedures:
  - Patients undergoing these high risk or ultra-high- risk procedure for aerosol generation should get mandatory laboratory testing for COVID-19.
  - For other, COVID positive or unknown COVID status emergency procedure - proceed as if positive.

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 for haemostasis and dissection such as electrocautery, powered devices (e.g. drills, microdebrider, harmonic scalpel, etc.)

Guidelines for above procedure (COVID Positive or COVID unknown)

1. Scrub nurse can set up as normal.
2. Patient transferred to OT table.
3. Anaesthetist, nurse, surgeon dons augmented PPE prior to intubation.
4. During intubation and extubation: All nonessential staff should leave the room and only return after the airway is secured. Anybody who is present should maintain appropriate PPE.
5. Jet ventilation procedures pose a particularly high risk and should be performed only under absolute necessity and with appropriate PPE, preferably in a negative-pressure room.
6. Less movement in and out of operating room as Procedure proceeds
7. The surgery starts immediately with all staff in the room with appropriate PPE
8. After the procedure is completed suction canisters are turned off and prepped for change to allow for egress.
9. 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.
10. Follow proper technique of Doffing of PPE and equipment in the room. Biomedical waste disposal to be done with caution
11. Transport:
    - 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.
    - If patient is negative and asymptomatic then standard transport (face mask, gloves) .

SPECIFIC PROCEDURES AND SCENARIOS

Airway/Tracheostomy

- Performing tracheostomy on patients with suspected or confirmed COVID imposes unique challenges on not only to ENT surgeons but the entire health care team.
- 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.
- 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.
- Avoiding early tracheostomy in patients with COVID is suggested because of the higher viral load that may be present at this time.
- Consider percutaneous dilatational tracheostomy or cricothyroidotomy if the patient's anatomy and 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 small sized non-fenestrated cuffed tracheostomy tube to make the tracheostomy hole small.
- 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 during weaning to prevent virus spread or reinfection to the patient.
- Avoid changing the tracheostomy tube until viral load is as low as possible.

Endoscopic sino-nasal and skull base surgery

- Endoscopic nasal operations including sinus surgery and trans- sphenoidal pituitary surgery are very high-risk procedures.
- In general, these procedures should be postponed in patients with COVID or those who cannot be tested.
- In negative patients, PPE for all operating room staff is recommended.
- Use of microdebriders must be discouraged, since this is an aerosol producing procedure.

Thyroidectomy and Neck Dissection

- Procedures that do not expose mucosal surfaces are lower risk.
- Use of energy devices can result in aerosolization of the virus from the bloodstream or other gastrointestinal secretions. Use of these devices should be minimized.
- Benign cases should be deferred

Cases requiring priority surgical intervention include

- Cancer with evidence of aerodigestive tract compromise/invasion
- Recurrent laryngeal nerve palsy due to malignancy
- Locoregional metastasis
- Large, compressive or rapidly growing tumors
- Poorly differentiated cancer

Head and neck oncology

- Patients over 70 years of age (and/or with high risk co-morbidities) who fulfill urgent cancer criteria should be prioritized in such a way as to minimize time in hospital environment.
- Consider best utilization of available diagnostic capacity. Where necessary, limit investigations to those modalities that are necessary for safe treatment decision making.
- Prioritize day care surgery e.g. wide local excision without reconstruction.
- Restrict surgical procedures requiring post-operative HDU/ICU care.
- Give consideration to reduce the length of surgery whenever possible, e.g. use of local/pedicle flaps rather than free flaps.
- Minimize all follow up appointments.

Ear Surgery

- It is likely that the lining of the eustachian tube, middle ear, and mastoid air cell system area contaminated.
- Drilling through the mastoid creates droplets and aerosols in significant amount and if the virus is present, could risk infecting everyone in the operating room environment.
- Mastoidectomy therefore is considered a high-risk procedure and should be avoided unless there is a life-threatening urgency to proceed.
- Cholesteatoma surgery and auditory implantation, including in children, should not be regarded as urgent.

Mask rotation

- Have at least 3-4 respirator. Change respirator daily and allow the used respirator to dry for 3 days. Allowing it to dry for 3 days, the virus is no longer viable. On 4th days first mask can again be used. This is one of way of reusing mask.

How to reuse our protective gear?

- Visor, Spectacles, Goggles: Could be cleaned with Alcohol
- PPE Suit: Could be washed with Soap/water, or Lysol. Fear with Chlorine water is that it may cause small holes
- Boots can be treated with Chlorine water /Soap- Water /Lysol

Some more information

- Once you get home, take bath, wash your clothes separately.
- Quarantine yourself at home for few days, if you think you have seen any suspected patient till his/her COVID is negative
- Let's not be ***super-spreader*** of disease

"Let's serve safely, remain safe and healthy"

With Best Regards
Society of Otolaryngologists of Nepal

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