WORLD SPINAL COLUMN SOCIETY

wfns SPINE COMMITTEE

PAKISTAN SOCIETY OF NEUROSURGEONS

GUIDELINES OF SPINE PRACTICE DURING COVID19 PANDEMIC

SCREENING THE PATIENTS:

1. All the patients with spinal consults should be **clinically screened**.
2. Any suspected and confirmed case of COVID-19 infection should be sent to the **infectious disease** clinic.

SPINAL OUTPATIENTS:

1. If possible conduct online consultations.
2. Consultation room should be well ventilated and equipped with disinfection equipment.
3. PPE for Doctors and Staff in OPD/ Training for PPE.
4. Educate staff to identify danger signs and safely triage as well as manage patients presenting with reparatory illness outside the main hospital campus.
5. Triage by staff: For outpatients screening should be done OUTSIDE the main OPD by asking about fever, cough, flu-like symptoms, recent travel history and temperature should be checked and recorded as well as contact history.
6. Use disinfectant frequently, especially after examining the patient.
7. Only one accompanying person, with one patient should be allowed.
8. Ensure supplies (tissues, sanitizer, and masks) are available for all patients with respiratory illness and waiting area has sufficient distant space.
9. Medical records should be maintained.

- *Advice on Standardized Diagnosis and Treatment for Spinal Diseases during the Coronavirus Disease 2019 Pandemic Jun Zou-Hao Yu-Dawei Song-Junjie Niu-Huilin Yang - Asian Spine Journal - 2020*
- *Wu Z, McGoogan JM. Characteristics of and Important Lessons from the Coronavirus Disease 2019 (COVID-19) Outbreak in China. JAMA [Internet] 2020*

MEDICAL PERSONALE PROTECTION:

- Change gloves after examining the patients.
- Avoid contact with accompanying person (Social Distance).
- Advise employees to check for any signs of illness before reporting to work each day and notify their supervisor if they become ill.
- If examination and laboratory results indicate pneumonia, then reports to the concerned department.
- Patients should wear a facemask to contain secretions during transport.

- *These are guidelines from WFNS Spine Committee. This is not a legal document and cannot be used in court of law.*

- Mortality rate of Corona Virus is low worldwide and majority of the deaths in medical community treating COVID patients, is with comorbidities or/ and increasing age.
- If possible, they should avoid personal contact and ideally, should stay at home.

- *Wang X, Pan Z, Cheng Z. Association between 2019-nCoV transmission and N95 respirator use. J Hosp Infect 2020 S0195-6701(20): 30097–9.*
- *Ai T, Yang Z, Hou H, et al. Correlation of chest CT and RT-PCR testing in coronavirus disease 2019 (COVID-19) in China: a report of 1014 cases. Radiology 2020 200642.*
- *Wu Z, McGoogan JM. Characteristics of and Important Lessons from the Coronavirus Disease 2019 (COVID-19) Outbreak in China. JAMA [Internet] 2020*

INTUBATION AND EXTUBATION

1. All nonessential staff leaves the room and only return after the airway is secured
2. All nonessential staff should be out of the room during extubation.
3. In some centers, an interval equivalent to known air exchange times for that operating room is practiced before other personnel are allowed to enter.
4. Intubation box should be used, if available.

- Givi B, Schiff BA, Chinn SB, et al. Safety Recommendations for Evaluation and Surgery of the Head and Neck during the COVID-19 Pandemic. *JAMA Otolaryngol Head Neck Surg.* Published online March 31, 2020
- *https://www.youtube.com/watch?v=L3q7p65VOOc*

COVID PANDEMIC: SURGICAL CONSIDERATION

1. Elective surgery can be planned once the pandemic is under control.
2. Emergency surgeries can be done by following protocols for patients and medical staffs, and also keep in consideration the local guidelines and measures.
3. Check for COVID 19 PCR and get chest CT for on list patients, if possible.
4. Repeat the same tests 3 days after surgery.
5. Early discharge of the patients who are excluded for any infection should be encouraged.
6. PPE for doctors, nursing staff, and paramedics.
7. Urgent Cases: 48 hours pre-op COVID testing.
8. If COVID positive, then powered, air-purifying respirator (PAPR) for all staff (if unavailable, transfer to a facility with PAPR).

**We understand that PAPR is not currently available in majority of our setups.*

- *Advice on Standardized Diagnosis and Treatment for Spinal Diseases during the Coronavirus Disease 2019 Pandemic Jun Zou-Hao Yu-Dawei Song-Junjie Niu-Huilin Yang - Asian Spine Journal - 2020*

INTRAOPERATIVE CONSIDERATIONS:

1. Reduce operative time. Use the minimally invasive approach.
2. Use suction devices so they can remove aerosols.
3. Avoid body fluid spatter.
4. Minimum traffic in the operative room.
5. N95 does not guarantee stopping the transmission of COVID-19 thus PAPR is recommended in COVID positive patients.
6. Operation theatre should have negative pressures when dealing with COVID-19 patients.

- *Tay JK, Khoo ML-C, Loh WS. Surgical considerations for tracheostomy during the COVID-19 pandemic: lessons learned from the severe acute respiratory syndrome outbreak [published online March 31, 2020]. JAMA Otolaryngol Head Neck Surg*
- *Advice on Standardized Diagnosis and Treatment for Spinal Diseases during the Coronavirus Disease 2019 Pandemic Jun Zou-Hao Yu-Dawei Song-Junjie Niu-Huilin Yang - Asian Spine Journal - 2020*
- *American College of Surgeons. COVID-19: guidance for triage of non-emergent surgical procedures. Accessed March 23, 2020*

MANAGEMENT OF AEROSOL GENERATING PROCEDURES (COVID plus)

1. Intra-operative use of drill/ debrider should be avoided.
2. The number of HCP present during the procedure should be limited to only those essential for patient care and procedure support.

SURGICAL PROCEDURE:

1. Emergency Spine Surgery: Following spinal procedures should be considered as urgent or emergency Adhere to guidelines (COVID-19)

    - Intraspinal pathologies with symptomatic spinal cord compression.
    - Spinal disorders with acute and progressive deficits.
    - Progressive cervical / thoracic myelopathy.
    - Vertebral fractures with severe pain, instability and/or deteriorating neurology
    - Spinal metastases and primary tumors with therapy-refractory severe pain, instability and/or compression.
    - Spinal infections with abscess formation, instability and/or compression.
    - Leaking myelomeningocele.

- Stellungnahme der Deutschen Gesellschaft für Chirurgie zur Verschiebung planbarer Operationen in der COVID 19 Pandemie Krise 24. März 2020

TRAUMA MANAGEMENT

1. Continue management of all trauma patients as per ATLS protocol.
2. Avoid unnecessary CT scans.
3. Good communication and patient handing over is vital in a setting of limited patient expose and less frequent examination.

- *https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/specialty-guide-management-of-patients-requiring-spinal-surgery-v1-20-march-2020.pdf*

TRANSORAL/ NSOPHARYNGEAL APPROACH TO SPINE

1. Associated with a very high risk of COVID-19 transmission.
2. Post-pone Transoral approach (think of alternatives).

- Givi B, Schiff BA, Chinn SB, et al. Safety Recommendations for Evaluation and Surgery of the Head and Neck During the COVID-19 Pandemic. *JAMA Otolaryngol Head Neck Surg.* Published online March 31, 2020.
- *http://naccs.org.uk/wp-content/uploads/2020/04/COVID_-_brain_tumour_priority_SBNS_BNOS_FINAL-002.pdf*

CPR

1. Do NOT start chest compressions or ventilation in patients who are in cardiac arrest if they have suspected or diagnosed COVID-19 unless they are in the emergency department and staffs are wearing full personal protective equipment (PPE) that means wearing an FFP3 mask, full gown with long sleeves, gloves, and eye protection.
2. The patients in cardiac arrest outside the emergency department can be given defibrillator treatment if they have a “shockable” rhythm.

- *https://www.resus.org.uk/media/statements/resuscitation-council-uk-statements-on-covid-19-coronavirus-cpr-and-resuscitation/*

DEALING WITH COVID 19 INFECTED PATIENTS

1. Provide supplies for respiratory hygiene and cough etiquette, including alcohol-based hand rub (ABHR) with 60-95% alcohol, tissues, and no-touch receptacles for disposal, at healthcare facility entrances, waiting rooms, and patient check-ins.
2. Suspected and confirmed patients who need surgical intervention should be dealt with precautions. All the involved teams, including anesthesiology, OR staff, management and infection control department, should be informed pre hand.
3. Coding for COVID patients with specific color.

- *https://www.cdc.gov/coronavirus/2019-ncov/index.html*
- *Babu JM, Patel SA, Palumbo MA, Daniels AH. Spinal emergencies in primary care practice. Am J Med 2019 132:300–6.*
- *National Health Commission of the People's Republic of China. COVID-19 diagnosis and treatment plan (trial edition seven) [Internet] Beijing: National Health Commission of the People's Republic of China. 2020*
- *Li Y, Li ZF, Mao QX, et al. Consensus on emergency surgery and infection prevention and control for severe trauma patients with 2019 novel coronavirus pneumonia. J Chin J Trauma 2020 36:97–103.*

3/30/2020

PPE Recommendations *Updated 3/30/2020*

Patient Care for Patients Not Suspected for COVID-19	Patient Care for Patients Suspected or Positive for COVID-19 *If interaction requires being within 3 feet of the patient, the patient should also wear a surgical mask*	Aerosol Generating Procedures[1] on Patients Susptected or Positive for COVID 19 AND Airway Procedures on All Patients
WHEN: • Patient has no COVID symptoms • Closer than 6 feet from patient for more than 1 minute	**WHEN:** • Patient has COVID symptoms OR has a COVID test pending or with positive result	**WHEN:** • Aerosol generating procedures[1] are being performed
WHERE: • Ambulatory Clinics • Emergency Department • Acute Care Units • Intensive Care Units • Procedural Areas	**WHERE:** • Ambulatory Clinics • Emergency Department • Acute Care Units • Intensive Care Units • Procedural Areas	**WHERE:** • Ambulatory Clinics • Emergency Department • Acute Care Units • Intensive Care Units • Procedural Areas
PPE Required: • Surgical/ear loop mask	**PPE Required:** • Eye protection/face shield • Surgical/ear loop mask • Gown • Gloves	**PPE Required:** • PAPR OR N95 Respirator + Face Shield/Eye Protection • Gown • Gloves

Note for all categories shown: Hand hygiene required upon entry and exit, regardless of whether the patient is under isolation, or PPE is worn.

[1] **Aerosol Generating Procedures Include But Are Not Limited to:** laryngoscopy/intubation, non-invasive ventilation, CPR, bronchoscopy, open suction, nasotracheal suction, nebulizer treatments

PPE for Specimen Collection: Nasopharyngeal swabs often generate a strong cough reflex. Standard/Contact/Droplet precautions are recommended.

Please see extended and re-use guidelines for N95 respirators.

https://www.facs.org/covid-19/clinical-guidance/surgeon-protection#intubation-risks

PLEASE NOTE: The COVID19 WFNS Spine Committee guidelines continues to evolve. We will try to update as new and credible information is available.