ASSI Task Force Guidelines

Case Scenarios For A Spine Surgeon

1. **Scenario 1 :** Performing an emergency procedure on a COVID-19 positive / suspected COVID -19 patient
2. **Scenario 2 :** An asymptomatic COVID negative turns COVID positive after surgery.
3. **Scenario 3 :** Biological Exposure of the Surgical team while performing surgery on a COVID-19 positive patient
4. **Scenario 4 :** After operating on a patient, one of the surgical team members turns positive.
5. **Scenario 5 :** Need to operate on a patient with a spinal emergency (like a fracture dislocation with partial neurological deficit) who is having a contact history, but throat swab negative.

Scenario 1 : Performing Emergency spine surgery on COVID-19 positive patient

[1–6][7–14]

1. Any patient could be infected with COVID-19 unless proven otherwise by a negative RT-PCR test.
2. A **dedicated COVID-19 operating theatre** should be designated, ideally a negative pressure theatre that is close to the theatre complex entrance to allow clear routes for movement of patients, without passing through non-infected areas.
3. Suspected or confirmed infected patients should be transported to the operating theatre along a designated route, designed to minimize contact with others.
4. The COVID-19 theatre should be adequately stocked with the equipment required for specific procedures. Runners should be available outside of theatre to pass equipment through a non-infected area.
5. When operating on COVID-19-postive patients or performing an Aerosol generating procedure, the operating room team members should be donned with
    a. **N-95 respirator mask** and
    b. Impervious **gown**, double **gloves**, and **eye protection**.
    c. Only when an RT-PCR test is negative for COVID-19, may surgical team members wear standard surgical clothing.
6. A surgeon may consider delaying an urgent or emergency procedure on a patient who exhibits viral symptoms (fever, cough, sore throat). If delay compromises the well-being of the patient, the surgeon orders in-house RT-PCR COVID-19 testing with a 24-hour turnaround. If the patient's status does not allow for a 24-hour wait, the case is considered to be an emergency and the patient is presumed to be COVID-19-positive.

7. Special considerations are made for the use of PPE during and after bag mask ventilation and endotracheal intubation, which both pose a high risk for viral transmission.
8. All health care providers who are not directly involved with intubation **are asked to leave the operating room beforehand**.
9. Anesthesiologists should be fitted with N-95 face masks and droplet-protective PPE because they are positioned at the head of the bed throughout the procedure. Cleaning staff should take droplet precautions when cleaning any operating room.
10. To conserve the institution's supply of N95 masks, a face shield may be placed over the mask.
11. The number of people in the operating room (OR) should be kept minimum – ideally < 8 (including anesthesia, surgical team, nursing and technicians)
12. Avoid aerosol generating and Splash generation methods during surgery
    a. Avoid pulse lavage, high speed burrs
    b. Use closed suction devices
13. The surgical team should discuss the plan of care beforehand and every attempt should be made to minimise the duration of surgery.
14. As far as feasible absorbable suture material should be used to reduce patient re visits.
15. Cleaning of the operating room should begin 30 minutes after the patient is wheeled out to let any remaining aerosol to dry up/cleared.
16. Theatre should remain closed for 4 hours before the next case is taken.

Scenario 2 : An asymptomatic COVID negative patient turns COVID 19 positive after surgery.[6] [7, 15, 16]

1. All patients being considered for surgery should be counselled about the possibility of acquiring COVID-19 infection during their stay in the hospital. Appropriate consent for the same should be taken beforehand.
2. Patients who develop fever of unknown origin or respiratory symptoms should be isolated, and chest CT performed or COVID-19 laboratory testing considered.
3. To prevent cross-infection, such patients should be cared for by **COVID-19-specific surgical teams** if possible, rather than teams who are also seeing uninfected patients
4. Contact tracing of the concerned patient should be done
5. RT-PCR test should ideally be done for all the other patients and staff engaged in the same ward.
6. All exposed medical professionals should immediately contact the Preventive Medicine/Occupational Health/Occupational Risk Prevention Department at their medical center and follow the instructions that are indicated.

7. When planning the concerned patients' discharge from hospital, surgeons should consider their psychosocial needs. If there is a possibility that patients are still infectious, they should be given clear advice on how to avoid transmitting COVID-19 to members of their household.

Scenario 3 : Biological Exposure of the Surgical team while performing surgery on a COVID-19 positive patient [1]

1. Exposed staff should be considered close contact and will be managed as such.
2. All exposed medical professionals should immediately contact the Preventive Medicine/Occupational Health/Occupational Risk Prevention Department at their medical center and follow the instructions that are indicated.
3. To date, there have been **no specific studies of post-exposure prophylaxis (PEP)** for COVID-19.
4. A retrospective study by Park et al. from 2019 on PEP for MERS in a limited number of healthcare professionals showed good results using a combination of antivirals (Lopinavir/Ritonavir + Ribavirin)

Scenario 4 : After operating on a patient, one of the surgical team members turns positive. [7, 15, 16]

1. The concerned staff should withdraw from health care services with immediate effect.
2. He should immediately contact the Preventive / Community Medicine Department at their medical center and follow the instructions that are indicated.
3. Contact tracing of the concerned staff should be done and all Exposed staff / patients should be considered close contact and will be managed as such.
4. All exposed medical professionals should immediately contact the Preventive Medicine/Occupational Health/Occupational Risk Prevention Department at their medical center and follow the instructions that are indicated.

Scenario 5 : Need to perform an emergency procedure on a patient who is having a contact history, but throat swab negative. [17][7, 15, 16]

1. Any patient could be infected with COVID-19 unless proven otherwise by a negative RT-PCR test.
2. As per studies done in Wuhan, China 97% of cases with RT-PCR-confirmed diagnoses had CT findings of pneumonia, and conclude, "CT imaging has high sensitivity for diagnosis of COVID-19".
3. Hence a pre-hospitalisation screening with CT Chest in addition to RT-PCR may be able to detect a silent case in the incipient phase.

4. Such procedure nonetheless should be done in dedicated COVID-19 designated OTs with standard precautions.

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