# TRACHEOSTOMY IN A COVID-19 POSITIVE PATIENT

# GUIDELINES OF CLINICAL PRACTICE OF THE FRENCH SOCIETY OF OTORHINOLARYNGOLOGY, HEAD AND NECK SURGERY (SFORL)

## APRIL 3RD 2020

1. Definition of patient COVID-19 positive and COVID-19 negative status before performing a tracheostomy
   - We can no longer currently consider regions and patients without risk of infection with COVID 19.
   - A patient can nevertheless be considered COVID-19 negative if:
     - There are no clinical manifestations of COVID-19
     - Less than 24 hours before the procedure, nasopharyngeal viral swab is negative and chest-CT scan does not show any bilateral peripheral alveolo-interstitial pneumonitis characteristic of COVID-19 infection.

2. The indication for tracheostomy and the choice of the technique is a multidisciplinary medical decision made by the anaesthesiologist and by the ENT surgeon

3. As far as possible (except absolute vital emergency) the tracheostomy must be done in an intubated patient.

4. Percutaneous technique should be preferred to cervicotomy technique, unless there is an anatomical contraindication to the first technique.

5. The percutaneous technique requires
    - A remote fibroscope and video screen
    - Optimizing oxygenation with 100% $FiO_2$ and adapting resistance levels with the fibroscope in the intubation probe due to a high risk of rapid desaturation and hypoxic cardiac arrest
    - A valve filter to insert the fibroscope in a closed circuit
    - Patient apnea should be available on demand during stages which are at risk of aerosolization (at risk of spreading of the virus)
    - If possible: a drug assisted neuromuscular block to reduce any risk of coughing.

6. For the cervicotomy technique, the following precautions should be taken:
    - Minimize the use of electrocoagulation once the trachea is open
    - Use a sterile transparent interface between the patient and the surgeon, in order to limit the risk of contamination
    - Whenever possible, carry out a drug assisted neuromuscular block to reduce any risk of coughing when opening the trachea
    - Stop ventilation just before the trachea is incised
    - Once the trachea is open and a cannula or endotracheal tube is inserted, connect the ventilation circuit to the cannula or the inserted endotracheal tube to resume ventilation of the patient

- Chose a reinforced endotracheal tube if the patient requires ventilation in a prone position and suture it to the skin
- Tracheostomy under local anesthesia is not recommended. However, if it is necessary, it is recommended to inject 5 cc of Lidocaine 5% intratracheally through the tracheal wall, before the incision of the trachea is performed in order to reduce the cough reflex.
- Whichever the procedure, an experienced team must be in charge, especially when opening the trachea because patient desaturation may be rapid.

7. Health security tips

- Limit the number of people in the operating room to a minimum
- Perform the tracheostomy procedure in the intensive care unit, if possible, to avoid contamination by COVID-19 during transport to the operating room.
- Surgical dressing
    - For head protection, prefer the hood cap rather than a simple cap
    - Wear a face mask rather than glasses
    - Protect the headlight with a head cap
    - Any impermeable protective apron or overcoat should be put under the surgical gown as it is not sterile
    - Wear an FFP3 or FFP2 (N95) mask

- Make sure that all the equipment and the aspiration tubes are ready, as well as all the equipment necessary for performing a tracheostomy before starting the procedure.

*NB: Advice and precautions are naturally likely to be modified on a day to day basis, following the evolution of the epidemic, the technical means available and scientific evidence concerning SARS-Cov-2.*

*Pr. Philippe Schultz, Strasbourg, France*

*Dr. Jean-Baptiste Morvan, Toulon, France*

*Pr. Nicolas Fakhry, Marseille, France*

*Pr. Sylvain Morinière, Tours, France*

*Pr. Sébastien Vergez, Toulouse, France*

*Pr. Beatrix Barry, Paris, France*

*Pr Emmanuel Babin, Caen, France*

*Dr . Dana Hartl, Villejuif, France*

*Pr. Ihab Atallah, Grenoble, France*

*Pr. Vincent Couloigner, Paris, France*