Barts Health

NHS Trust

SOP for Tracheostomies during Covid-19 Pandemic Royal London Hospital

Applies to **all tracheostomies** undertaken (whether known Covid-19 or not due to high risk nature of procedure and increasing prevalence in community)

Surgical technique (easier to control aerosol generation; shortage of skilled ICU staff to perform percutaneous procedures).

Preconditions & Preparation

- 1 tracheostomy per day (to be kept under review)
- Two ACCU consultant decision and discussion with surgical team and senior
  anaesthetist
- Unlikely to be indicated after less than 10-14 days of ventilation (may evolve)
- Consider trial of extubation– ie high threshold to perform tracheostomy
- Patient should be apyrexial with falling inflammatory markers (a surgical
  procedure undertaken during viraemia risks precipitating a clinical deterioration)

- Patient should be requiring PEEP ≤ 10 cmH_2O and FiO_2 ≤ 0.4 (to promote
  tolerance to periods of apnoea and potential de-recruitment)

- Haemodynamically stable with minimal pressor requirement

- Review CXR to ascertain starting distance of ETT tip above carina.

- Patient fasted for 6 hours

- patient to have a full coagulation screen- abnormal results noted and plans for optimisation in place.

Skilled team

- Consultant surgeon (OMFS or ENT)*

- Skilled assistant (senior OMFS / ENT registrar)

- Scrub nurse

- Consultant anaesthetist skilled in anaesthesia for surgical tracheostomy*

- Second anaesthetist

- ODP

- Second theatre nurse as runner in theatre

- CLEAN runner in anaesthetic room with silver trolley to supply additional
  equipment required by anaesthetic and surgical teams
  * Staff drawn from agreed list
  Full PPE for all theatre staff (including FFP3 mask and visor. Powered hoods (PAPR) are available, but with logistical issues
  Location & theatre preparation

- Book case with emergency theatres and liaise with theatres **day prior to** and
  on the morning of planned procedure to plan logistics – ideally schedule for
  afternoons using second emergency theatre team.

This has now changed referrals will be managed by email via a shared email account initially by JH/NB/EW- this can be handed over in terms of sickness.

referrals will be prepped and presented at the tracheostomy MDT by NB/EW- treatment plans will be formulated and planned for theatres depending on available resources and staff.

- Negative pressure side room on ACCU (staffed by the emergency theatre
  team) may be used for Covid- 19 patients, but requires careful planning.

4th floor Covid-19 operating theatres (positive pressure). Current BH guidance suggests leaving laminar flow turned on. Discuss merits of performing procedure here in Covid-negative patients (situation will evolve).

‘Clean’ 3rd floor ACAD theatres may be considered for Covid-19 negative patients with team discussion of risks and benefits. No Covid-19 positive patients to have tracheostomies here (situation will evolve).

ACCU Preparation

- Bring range of tracheostomy tubes if patient from ACCU – Tracoetwist subglottic suction tracheostomy tube as preference (do not use fenestrated tubes). Consider risk/benefits of using large tubes-aim for size 8 for males and size 7 for females.

- Bring tracheostomy specific in-line suction set (different to ETT set)

- Enquire if any additional procedure required whilst in theatre – e.g. NG tube
  insertion / change, line changes

- ICU to stabilise patient on transport ventilator 30 minutes before transfer.

Transfer

- Transfer to and from theatre in accordance with BH Covid-19 Transfer Policy

- Bring ETT clamp with you.

- Transfer with ETT in-line suction in circuit. Tape concertina connections,
  which easily loosen.

- Take directly into operating theatre

Airway equipment in theatre:

- Suction equipment with yankauer and tracheal suction catheters (avoid use if possible). Put tape across yankauer hole.

- MAC4 laryngoscope

- 20 ml syringe

- Tape to re-secure ETT

- Eye tapes and pads

- Drugs

- Clamp for ETT

- long theatre ventilator tubing
  All other airway equipment available in anaesthetic room with clean runner. Know location of video laryngoscope.

Pre-operatively

- Consider reducing theatre temperature for staff comfort wearing PPE.

- Transfer onto operating table - patient head at anaesthetic machine end.

- To place on theatre ventilator, clamp ETT then turn off transport ventilator
  before transferring to theatre ventilator.

- Leave ETT in-line suction in situ.

- NatSSIPs sign in and time out including tracheostomy time out (this check- list).

• Scrub team to assemble tracheostomy in-line suction to clean HME filter. Suggest replacing its concertina section for standard catheter mount concertina (less liable to disconnect).

Patient preparation

- Tape and pad eyes

- Surgical positioning - Head ring and shoulder roll (or other as requested by
  consultant surgeon)

- Drape and proceed
  Anaesthetic team advance ETT to carina

- Suction oropharynx with Yankauer and trachea via in-line suction.

- Advance ETT blindly with cuff inflated BEFORE surgeons make tracheal window (see below). Observe ventilator for signs of right main bronchial intubation (increase in peak airway pressure if

volume control mode, fall in tidal volume if pressure control mode). The precise timing of this must be planned and communicated with the surgical team.

Surgical procedure and airway management

- Dissection to trachea

- Prior to making tracheal window

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  - Pre-oxygenate
  - Give additional dose muscle relaxant
  - Stop ventilation in case of inadvertent ETT cuff puncture

Ventilation can be resumed after tracheal window formed if cuff intact.

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- Once window prepared and rescue suture in place ○ Suction oropharynx
    - Stop ventilation
    - Deflate cuff and withdraw ETT under the direction of the surgeon

- Insert tracheostomy
    - If unable to insert tracheostomy, re-advance ETT and re-inflate

cuff PRIOR to recommencing IPPV.

- Once tracheostomy in situ, inflate cuff, connect in-line suction (from scrub nurse), HME and ventilator tubing.

- Commence ventilation.

- Confirm placement by observing capnography and bilateral chest movement

- Do not auscultate unless specific concern

- Suction trachea using closed in-line suction

- Suture tracheostomy and secure neck ties

Post-procedure

- Complete tracheostomy passport

- Care when removing ETT. Suggest wrap in head drape.

- Transfer patient back to bed with a single circuit break to reconnect to
  transport ventilator. Tracheostomy cannot be clamped, so clamp tracheostomy in-line concertina section.

- Tape in-line suction concertina connections.

- Transfer back to ACCU in accordance with BH Covid-19 transfer policy, in full PPE.

- Transfer with tracheostomy dilator and smaller tracheostomy or ETT

- Check cuff pressure

- Transfer back to ICU ventilator with single circuit break as before.

- CXR only if indicated (not required for uncomplicated procedure)

- Refer to theatre policy for decontamination of operating theatre and equipment. Care if in ICU negative pressure room.

- All staff change their scrubs and shower following the procedure

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