CICU TRACHEOPLASTY GUIDELINE

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<td><u>Preoperative phase:</u>

Obtain patient history, height, weight and BSA

Arrange Multidisciplinary Meeting (Pulmonologist, ENT, CICU, CTS, Cardiologist and Anaesthetist)

Family Conference and obtain consent

Arrange for OT</td>
<td><u>Investigations required</u>
• Chest X-ray
• CT thorax (including neck)
• Bronchoscopy
• Echocardiogram
• Swallowing assessment +/- video fluoroscopy – if needed
• ETT aspirate/respiratory gram stain/ culture

Blood investigations:

• FBC, UECr, PT/PTT, GXM
• ABG/ venous gas
• Consider Genetics referral and testing
• If Immunodeficiency suspected, to do:
o IgG, IgA, IgM, IgG Subclasses
o Basic Lymphocyte Subsets</td>
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<td><u>Intraoperative phase</u>

Tracheoplasty

Perform bronchoscopy after the procedure and adjust ETT

Mark the area of stenotic trachea
– For cases <u>without</u> tracheal bronchus: place the ligaclip for both proximal and distal end before anastomosis
– For cases <u>with</u> tracheal bronchus : only mark the proximal end before anastomosis

Perform echocardiogram to check on PA sling or other intracardiac lesions

Start IV antibiotics (IV cefazolin), escalate if needed

Connect drains to underwater seal chest drainage system

To use normal screen for draping the child. DO NOT USE CAGE</td>
<td><u>Investigations required:</u>

Swab culture from trachea</td>
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<u>Postoperative phase (OP DAY)</u> Record the ETT size and marking and place on the bedside. Standby additional same size of ETT at the bedside Keep intubated and ventilated. Aim for conventional ventilation. If PIP > 28, Consider HFOV Keep head midline. DO NOT HYPEREXTEND the neck. Allow ETT suctioning to specified depth – check with CTS re maximum depth allowed for ETT suctioning. This should be documented and placed at the bedside. ETT lignocaine before suctioning. Chest drains to wall suction at pressure of 10cm H2O Keep patient paralysed and well sedated (Target SBS -2) Keep Indwelling urinary catheter Total fluids 50mls/kg/day (Total fluids 50% maintenance) IV Cefazolin (unless otherwise indicated) IV Omeprazole IV Inotropes as required IV Rocuronium for 24-48 hours IV Frusemide Update family	*<u>Investigations required:</u>* • Chest X-ray • FBC, UECr, PT/PTT, ABG, Lactate and Blood Glucose (*Repeat ABG with lactate **2hourly x3**, adjust accordingly thereafter)
<u>Postoperative phase (POD 1):</u> Increase total fluids according to patient's age/weight Keep drains Continue paralysis and keep well sedated (Target SBS -2) Continue IV antibiotics Start NGT feeds KIV bronchoscopy if any indications (secretion/obstructions) Physiotherapy assessment – aim to commence chest PT	*<u>Investigations required:</u>* • Chest X-ray • FBC, UECr, PT/PTT OM • ABG, Lactate 8hourly • Obtain fluid cultures from chest drains OM

Postoperative phase (POD 2): Keep drains Increase feeds as tolerated Continue IV Antibiotics Aim to lift paralysis, Wean Sedation as tolerated Assess need for Frusemide Continue chest PT	*Investigations required:* • Obtain fluid cultures from chest drains OM
Postoperative phase (POD 3/4): Remove Drains if less drain output/ no air leak Wean ventilation as tolerated Continue IV Antibiotics Increase feeds as tolerated Remove Indwelling Urinary Catheter Wean Sedation Continue chest PT Extubate to CPAP if able (consider short course of dexamethasone prior to extubation)	*Investigations required:* • Do CXR post drain removal • Consider bronchoscopy in ICU/OT at time of extubation to assess airway and vocal cords.
Postoperative phase (POD 5/6): Discontinue IV antibiotics if drains are removed Remove Arterial Line / Central line (If patient is stable/extubated) Wean CPAP as tolerated Start Oral Augmentin (1 week) Commencement of oral feeds – Feeding assessment	

Discharge Planning :

- Parents are to attend CPR training
- Refer to Homecare team for necessary equipment arrangement (e.g. CPAP, oxygen concentrator, tube feeding, SpO2 monitor etc.)
- Plan for bronchoscopy and CT scan 3 months post-surgery for evaluation
- Perform regular echocardiogram if there are significant intracardiac lesions
- Suggest IV Synagis vaccination (to raise MAF request if financial concerns)
- Outpatient clinic follow up:
    - Cardiothoracic surgery 2 weeks after discharge, CXR OA
    - Respiratory Medicine, Cardiology if needed