Version 1.0

Paediatric RSI (ICP DOC)

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Indications

- Worsening pulmonary function tests despite vigorous bronchodilator therapy
- Decreasing PaO_2
- Increasing $PaCO_2$
- Progressive respiratory acidosis
- Declining mental status
- Increasing agitation

Contraindications

- Spontaneous breathing with adequate ventilation
- operator concerned that both intubation & mask ventilation may not be successful
- Major laryngeal trauma
- Upper airway obstruction
- Distorted facial or airway anatomy

Preparation

Assess risks

- AMPLE history & examination of the neck, face, head nose & chest

Minimum equipment for RSI

- Appropriate sized bag-valve mask with reservoir
- Suction (fully hooked up and functional)
- Oxygen (hooked up to bag-valve mask)
- Laryngoscope with appropriate size blades and functioning lights
- Appropriately sized ETT (with one size smaller & larger) + stylet for ETT ± boogie
- All pharmaceutical agents to be used where intubation is planned
- Alternative airway equipment in location where intubation is planned

Description

- Most senior or experienced member of staff to do procedure
- Use a stylet to facilitate intubation
- Straight laryngoscope blades should be used up to the age of 4-5 years
- Intubation technique
  - Similar to that in the adult. Always have ready a tube one size smaller and a tube one size larger ready
  - Ensure appropriate monitors (HR, BP, pulse oximeter)
  - Pre-oxygenation is critical
  - Position is key - Child's trachea takes off from the oral cavity at a 45 degree angle
  - Pre-medicate with Atropine if necessary
  - Administer appropriate sedative agent (ketamine)
  - Apply cricoid pressure (Sellick manoeuvre)
  - Administer neuromuscular blocking agent (suxamethonium)
  - Advance tube until it goes through the cords and advanced another 1-2 cm
  - Determine accurate placement (end-tidal CO_2, oesophageal detector device)
  - Secure the tube firmly

Outcomes - Verified placement

- Visualisation of tubes passage through the cords
- Auscultation of bilateral breath sounds and absence of bubbling over stomach
- Observation bilateral chest movement
- Maintenance of good pulse oximetry readings after intubation in paralysed patient
  - False negative – if profoundly shocked or inadequate chest compressions
- Appropriate waveform and quantitative measurement of ETCO2
  - False positive – if mouth-to-mouth resuscitation or pt has had carbonated drinks
- Chest x-ray
  - Portable AP can miss of oesophageal intubation if oesophagus & trachea aligned

Complications

- Oesophageal intubation
- R main bronchus intubation
- Hyperventilation & barotrauma after intubation
- Can't intubate ± can't ventilate