Tracheostomy, Preoperative and Operative Considerations

Jay Werkhaven, MD
Pediatric Otolaryngology
Vanderbilt University
Preoperative Evaluation

• Indications for tracheostomy
• Anatomic evaluation
• Physiologic evaluation
• Caregiver(s) – are they capable?
Indications for tracheotomy

• Support of ventilation
• Management of aspiration/secretions
• Airway bypass
Anatomic Evaluation

- Presence of neck
- Position of jaw
- Head extension
- Neoplasms
- Vascular anomalies
- Trachea
Vascular Anomaly
Prominant Inominate
Trachea

- Agenesis
- Stenosis
Tracheal Stenosis
Physiologic Evaluation

- Peak inspiratory pressure
  - Cannot sustain long term ventilation with high pressures (over 25cm)
- Prolonged pressure over 22cm may damage tracheal mucosa and cartilage
Operative Considerations

• Repeat airway evaluation
• Perform tracheotomy over rigid bronchoscope
• Divide thyroid isthmus
• Vertical incision into trachea
• Stay sutures
• Do not suture trachetomy tube to skin
• Mepilex dressing to protect neck
Post-operative Care

• PICU
• Tracheotomy care – family instruction
• First tracheotomy tube change at 5-7 days