Southern Illinois Regional EMS System

II-17 ADULT ENDOTRACHEAL INTUBATION

Policy:

- To establish a guideline for endotracheal intubation of the patient with airway compromise.

Indications:

- Apnea or respiratory depression on unresponsive patient without a gag reflex.
  - If gag reflex is present, consider Drug Assisted Intubation.
- Inability to adequately ventilate the patient with a BVM and other airway adjunct.
- Apnea or respiratory depression accompanied by vomiting and/or aspiration risk.
- Impending airway compromise or failure
  - Inhalation burns
  - Anaphylaxis

Contraindications:

- Conscious patient with intact gag reflex and no airway compromise.

Prepare Equipment:

- Use appropriate PPE including gloves, eye protection, and facemask.
- Prepare all necessary supplies and equipment.
  - Suction equipment and catheters.
  - Appropriate size endotracheal tube
  - Stylet
  - 10 mL syringe.
  - Appropriate laryngoscope handle and blades.
  - Lubricant
  - Tape or commercial securing device
  - $ETCO_2$, colormetric CO_2, or bulb check.
  - Check cuff integrity while still in package, leave syringe attached to pilot balloon.
  - Have an alternate airway plan prepared and within reach.
- Attach the appropriate laryngoscope blade to handle:
  - Assure that bulb is functioning.
  - Lock handle and blade into place.
- If using a stylette:
  - Insert stylette into the tube.
  - Conform to desired configuration/shape.
  - Make sure that end of stylette is recessed at least ½ inch from the tube opening to prevent trauma during intubation.

Prepare the Patient:

- Fully assess respiratory status
- Pre-oxygenate the patient for at least one minute.
- Remove any previously placed oropharyngeal airway.

II-17 ADULT ENDOTRACHEAL INTUBATION
(continued)

- Position the patient for intubation.
  - NO HEAD OR NECK TRAUMA SUSPECTED:
    - Place the patients head into the “sniff” position using the head tilt/chin lift.
  - PATIENT WITH SUSPECTED HEAD OR NECK TRAUMA:
    - Open the airway using a modified jaw thrust and maintain in-line cervical spine stabilization during the entire process.

Placing the Endotracheal Tube:

- Withdraw tube from packaging and open patient’s mouth using cross finger technique.
  - Hold the tube in the right hand and the laryngoscope in the left hand.
- Carefully insert the laryngoscope blade into patient’s mouth.
  - Insert the blade from the right side of the mouth, sweeping the tongue to the left.
    - Sweep until the blade reaches midline, then locate landmarks.
  - Miller blade / straight blade
    - Use the tip of the blade to physically scoop the epiglottis and lift it up, allowing the visualization of the glottic opening.
  - Macintosh blade / curved blade
    - Insert the tip of the blade into the vallecula and lift up.
      - This upward motion will lift corresponding anatomy, including the epiglottis, allowing visualization of the glottic opening.
  - Avoid inserting the full length of the laryngoscope blade without first visualizing landmarks, causing the blade to force the epiglottis over the glottis opening.
- When the blade is at the appropriate place, lift up and forward at a 45 degree angle.
  - Avoid contact with the patient’s teeth, do not use the teeth as a fulcrum.
- When the vocal cords are visible, insert the tube through the cords.
  - Continue to insert the tube until the distal cuff is 2 mm beyond the cords.
  - If the cords cannot be visualized, the ET tube should not be placed blindly.
    - Consider an alternate technique or device for maintaining the airway.
- Remove the laryngoscope blade while holding and maintaining the tube location.
- Inflate the distal cuff of the tube with 10 mL of air while maintaining tube location.

Ventilation and Confirming Proper Placement:

- Ventilate the patient through the ET tube and verify proper placement.
  - Auscultate the epigastrium and both right and left lung fields.
    - If air sounds are found in the epigastrium, withdraw the tube and reattempt.
    - If lung sounds are more prominent in the right lung fields and absent in the left, consider placement in the right mainstem bronchi.
      - To correct, deflate the distal cuff and withdraw the tube enough to leave the right mainstem and reside in the trachea.
  - Besides visualization and auscultation, verify placement with a commercial device.
    - $ETCO_2$ monitoring is the most accurate and preferred method to verify proper endotracheal tube placement.
    - Colormetric $ETCO_2$ device.
    - Esophageal bulb check device.

II-17 ADULT ENDOTRACHEAL INTUBATION
(continued)

Securing the Endotracheal Tube:
- Secure the ET tube using tape or a commercial device.
- Record the millimeters of depth visible on the exterior of the ET tube.

Notes:
- Continuously monitor patency of the ET tube and ventilations.
- Reevaluate ET tube placement every time the patient is moved.
- Intubation attempts should not exceed 30 seconds in duration.