

ADVANCED AIRWAY MANAGEMENT

I. PEDIATRIC ADVANCED AIRWAY MANAGEMENT

Pediatric patients ≤ 8 years of age should have their airway preferentially managed via BVM and oral or nasal airway.

II. ADULT ORAL ENDOTRACHEAL INTUBATION

INDICATIONS

Considered for patients with:

- Apnea
- Inadequate respiratory effort, or
- An inability to protect the patient airway (e.g., Glasgow Coma Scale less than or equal to 8)

CONTRAINDICATIONS

Inability to visualize anatomical landmarks.

EQUIPMENT

1. Oral airway
2. Bag-valve-mask
3. O₂
4. Suction
5. Stethoscope
6. Appropriately sized ET tube and stylet
7. Appropriately sized Laryngoscope blade and handle
8. 10cc syringe
9. ETT holder
10. Pulse oximeter and capnography

PROCEDURE

1. Apply personal protective equipment.
2. Position patient to open airway, insert OP and maintain in-line stabilization for all suspected trauma patients.
3. Create seal with mask on patient's face and assist ventilation with bag-valve-mask device.
4. Assemble all equipment and test for function. Attach pulse oximeter.
5. Remove oral airway, insert laryngoscope blade to visualize vocal cords.
6. Insert the ET tube until the cuff passes through the cords and remove the stylet if used.
7. Immediately connect the EtCO₂ detector to the ET tube and confirm placement with EtCO₂ waveform.

ADVANCED AIRWAY MGMT. (cont.)

8. If EtCO₂ waveform indicates **improper** ET tube placement, immediately remove the ET tube and ventilate the patient using the BVM. Consider securing an airway with the King/Supraglottic Airway.
9. If ET tube placement cannot be visualized with direct laryngoscopy, return to step 3. May repeat for a total of two (2) attempts, then proceed to Part II -- King/Supraglottic Airway Intubation.
10. All patients, once intubated, should have both lungs auscultated for adequate ventilation. Next auscultate the epigastric area for absence of air movement, then secure the ET tube and insert oral airway. **Attach capnography and monitor continuously.**
11. If inadequate lung sounds are auscultated on the **LEFT** side, the tube should be pulled back in 1 cm increments until equal breath sounds are heard.
12. Lung sounds should be continually re-assessed throughout patient contact and whenever patient is moved or position changed. Continually reassess pulse oximeter and capnography.
13. If at any time:
 - the bag becomes difficult to compress,
 - there is evidence of hypoperfusion (changes in vital signs, mental status or decreased capillary refill),
 - change in tube position does not demonstrate clinical improvement,Tube placement verification should be reassessed by direct visualization. Reassess pulse oximeter and capnography. If the ET tube is inappropriately placed, return to step 3.
14. If the ET tube is appropriately placed, consider chest decompression for tension pneumothorax.
15. Continue to assist ventilations as indicated.
16. Documentation should include all procedures associated with intubation process that were attempted and completed.

II. KING LTS-D AIRWAY (SUPRAGLOTTIC AIRWAY) INTUBATION

INDICATIONS

- Airway management in a non-breathing person without a gag reflex
- Patient is over 4 feet in height.

CONTRAINDICATIONS

- Patients under 4 feet in height.
- Intact gag reflex.
- Patients with known esophageal disease
- Patients who have ingested caustic substances

EQUIPMENT

1. King LTS-D Airway
2. 14 Fr soft suction catheter
3. Lubricant
4. 60 cc syringe

PROCEDURE

1. Pre-oxygenate the patient.
2. Choose the correct size King LTS-D airway
 - **Size 3** fits **4-5 feet** in height **Yellow** connector.
 - **Size 4** fits **5-6 feet** in height **Red** connector.
 - **Size 5** fits **6+ feet** in height **Purple** connector.
3. Inspect the King LTS-D for visible damage prior to insertion.
4. Test cuff to ensure there are no leaks.
5. Apply a water-based lubricant to the beveled distal tip and posterior aspect of the tube. Avoid getting lubricant near the ventilatory openings.
6. Position patient's head. The ideal position for the King LTS-D insertion is "sniffing position". The angle of the King LTS-D does not allow for insertion at a neutral angle.
7. Hold the King LTS-D at the connector with the dominant hand. With the non-dominant hand, hold the mouth open and apply chin lift, unless contraindicated by C-spine precautions or patient position. Using a lateral approach, introduce tip into corner of mouth.
8. Advance the tip behind the base of the tongue while rotating tube back to midline so that the blue orientation line faces the chin of the patient.
9. Without exerting excessive force, advance the King LTS-D until base of connector is aligned with teeth or gums.
10. Inflate the cuffs with the minimum volume necessary to seal the airway. Inflation volumes are located the King LTS-D airway. Typical inflation volumes are as follows:
 - Size 3: 45-60 cc
 - Size 4: 60-80 cc
 - Size 5: 70-90 cc
11. Gently ventilate the patient using BVM. If initial ventilations meet resistance perform the following:
 - Slowly pull back on King LTS-D airway while gently ventilating.
 - When ventilations suddenly become easy and free flowing with corresponding chest wall rise maintain that level of insertion.
12. Confirm placement to ensure adequate ventilations by auscultation of lung sounds, observing adequate chest rise, and verification of end tidal CO₂ waveform.

13. If necessary, add additional volume to cuff to maximize seal of the airway (within cuff size limits).
14. Secure King LTS-D airway to patient utilizing tape or appropriate commercial device.
15. Lubricate a 14 Fr. suction catheter prior to inserting into the King LTS-D's gastric access lumen.
16. Document the size of King LTS-D airway used and the depth of insertion at teeth or lips.

Note: The King LT airway does not protect the airway from aspiration like ET intubation does.

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