

SUBJECT: ADVANCED LIFE SUPPORT, NEEDLE CRICOTHYROTOMY PROTOCOL

I. PURPOSE:

To establish an Advanced Life Support (ALS) protocol and policy for the use of needle cricothyrotomy as part of the San Luis Obispo County's Basic Scope of Practice as defined by the California Code of Regulations, Title 22, Chapter 4, Section 100145.

II. POLICY:

- A. Certified paramedics, either accredited, or while acting as a candidate for accreditation by the San Luis Obispo County Emergency Medical Services Agency, shall follow this ALS treatment protocol while on duty and rendering medical care.
- B. Paramedic personnel shall utilize ALS principles and skills as indicated in this protocol.
- C. Deviations from this protocol shall be made only by on-duty paramedics under the direction of an on-duty base station physician.

III. PERCUTANEOUS NEEDLE CRICOTHYROTOMY CRITERIA/INDICATIONS

- A. Complete upper airway obstruction resulting in severe respiratory distress which cannot be ventilated by conventional airway maneuvers in accordance with EMS Agency Policy No. 616
- B. This procedure is a temporary, non-definitive airway. Rapid transport and early notification is imperative.

IV. INDICATIONS

- A. Complete upper, unrelieved, airway obstruction possibly due to the following conditions:
 - 1. Epiglottitis
 - 2. Fractured larynx
 - 3. Foreign body aspiration
 - 4. Facial burns involving the upper airway
 - 5. Laryngeal edema
 - 6. Laryngospasm
 - 7. Massive facial trauma

V. AUTOMATIC ORDERS:

- A. Position the patient supine with head and neck in neutral position, maintaining in-line axial stabilization as indicated. Procedure is ideally performed facing the patient.

- B. Locate the cricothyroid membrane by palpating the space between the thyroid cartilage and the cricoid cartilage. Cleanse the area with providone-iodine solution and alcohol.
- C. Place the index finger of the non-dominant hand on the patient's thyroid cartilage and run the tip of the finger down the midline until the soft depression of the cricothyroid membrane is felt between the thyroid and cricoid cartilages. Keep the index finger in place on the cricothyroid membrane to positively mark the location.
- D. With the index finger in place on the cricothyroid membrane, use the thumb and middle finger of the same hand to stabilize the trachea from lateral movement. Move the tip of the index finger just enough to place the point of the needle directly over the cricothyroid membrane.
- E. Using a maximum 10 gauge, or smaller catheter over needle IV device, angle the needle about 45 degrees, pointing toward the patient's feet. Advance the needle through the cricothyroid membrane while aspirating the syringe. Aspiration of air indicates entry into the trachea. Stop advancing the needle as soon as air is aspirated.
- F. Advance the catheter over the needle, avoid bending the catheter while placing the catheter well into the trachea and angled downward. Withdraw the needle.
- G. Attach distal end of pre-cut, 3 mm endotracheal tube into catheter hub and ventilate using the appropriate size ambu-bag.
- H. Use tape and gauze to secure catheter to the neck as well as a dedicated individual who must maintain constant manual stabilization of catheter while ventilating the patient.
- I. Reassess lung sounds for presence of expanding hematoma or SQ air.
- J. In the event of above complications, consider removing catheter, sealing the opening, and repeating the procedure with rapid transport and early notification of base station of any difficulties.