

SINGLE SKILL STATION

Emergency Surgical Airway (Cricothyroidotomy)

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Objective

Demonstrate the proper technique and procedure for a surgical airway (cricothyroidotomy).

Reference

- *PHTLS: Prehospital Trauma Life Support, 9th ed.*
- *Advanced Trauma Life Support (ATLS) Manual, Tenth Edition, American College of Surgeons*

Evaluation

The instructor will verify the participant's ability to perform an emergency surgical cricothyroidotomy on an airway trainer by observing the participant's procedure and technique.

Materials

- Surgical cricothyroidotomy simulator
- Betadine/alcohol prep
- #10 or #15 scalpel
- Curved hemostats
- Cric hook
- 6.0 endotracheal (ET) tube
- 10-cc syringe
- Gauze pads (4 × 4)
- Gauze tape or circumferential tie
- Ambu bag

Instructor Guidelines

1. Ensure that each participant has all the required materials.
2. Read the objective and the evaluation method to the participants.

Performance Steps

1. Assemble and test all the necessary equipment.
2. Verbalize that body substance isolation (BSI) precautions are considered.
3. Assess the upper airway for visible obstruction.

4. Identify the cricothyroid membrane between the thyroid and cricoid cartilages. Using a classmate, identify to an instructor the location of the top of the thyroid cartilage, the thyroid prominence (on males), the bottom of the thyroid cartilage, the top of the cricoid cartilage, and the cricothyroid membrane.
5. Identify the site of the skin incision. Using a classmate, draw a dotted line midline from the bottom of the thyroid cartilage to the top of the cricoid cartilage that overlies and bisects the cricothyroid membrane where a skin incision is made during an actual cricothyroidotomy.
6. Palpate the cricothyroid membrane and (while stabilizing the cartilage) make a vertical incision through the skin directly over the cricothyroid layer.
7. While continuing to stabilize the larynx, use the scalpel or a hemostat to cut or poke through the cricothyroid membrane.
8. Insert the tips of the hemostat through the opening and open the jaws to dilate the opening. A cric hook may also be used for this purpose.
9. Insert the ET tube between the jaws of the hemostat; the tube should be in the trachea and directed toward the lungs.
10. Inflate the cuff with 10 mL of air.
11. Check for air exchange and verify placement of the tube by listening and feeling for air passing in and out of the tube, causing the tube to mist, and looking for bilateral rise and fall of the chest.
12. If the position is correct, secure the tube with tape or a commercial tube-securing device.
13. Apply a dressing to protect the tube and incision site further.
14. Monitor the patient's respirations. Ventilate, if required.

Critical Criteria

1. Did not obtain a patent airway with the emergency surgical airway.
2. Did not correctly identify the location of the cricothyroid membrane.
3. Performed procedure in a manner that was dangerous to the patient.