SURGICAL CRICOXYROTOMY, PEDIATRIC

SCOPE:

To outline the proper procedure for performing a surgical cricoxyrotomy on a patient less than 12 years old.

INDICATIONS:

Respiratory arrest in which oxygenation and ventilation with endotracheal airway or supraglottic airway cannot be established, such as:

A. Excessive oropharyngeal hemorrhage
B. Complete upper airway obstruction
C. Massive airway trauma with distortion of airway structures
D. Multiple failed attempts with endotracheal or supraglottic airway

CONTRAINDICATIONS:

Age less than 6 years old. Consider Needle Cricothyrotomy for age less than 6 years old.

PRECAUTIONS:

This procedure can be extremely difficult to perform when the anatomy of the neck is distorted.

COMPLICATIONS:

A. Exsanguinating hematoma from vascular injury
B. Damage to the airway and/or esophagus

PROCEDURE:

A. Position the patient supine, hyperextending the neck if possible. Use sterile technique.
B. Prep the area in a sterile fashion
C. Identify the cricothyroid membrane below the thyroid cartilage.
D. Use your non-dominant hand to stabilize the larynx
E. Make a VERTICAL incision 2 cm in length in the midline over the cricothyroid membrane
F. Palpate the cricothyroid membrane with the index finger of the nondominant hand to confirm that the incision has been made in the proper location
G. Blunt dissection may be required to visualize the cricothyroid membrane
H. Using a scalpel, make a 1 cm HORIZONTAL incision into the lower half of the membrane.
I. Insert a tracheal hook (this can be made by bending a needle into a hook) into the superior portion of the incision and gently lift the thyroid cartilage. Have an assistant hold the hook.
J. Insert a pair of upside down curved hemostats into the incision to dilate the lateral wound margins
K. Insert a cuffed ET tube into the incision (use the anticipated size tube or one smaller for patient age/size).
L. Inflate the cuff.
M. Oxygenation with 100% oxygen with BVM
N. Confirm placement by capnography.
O. Secure the tube in place.