DATE: 01/01/03

MEDICAL PROCEDURES

ENDOTRACHEAL INTUBATION (ADULT) POLICY #7100

PREPARATION OF PATIENT:

Remove or suction any foreign materials in patient's mouth.
Ventilate the patient with 100% oxygen for a minimum of 60 seconds.
Position the patient in the "sniffing" position with the neck flexed and the head extended.
Traumatic arrest.
- No apparent **C-spine** injuries: position the patient in the "sniffing" position with the neck flexed and the head extended.
- Suspected **C-spine injury:** an assistant will provide in-line stabilization in the neutral position.

Stop ventilations and compressions.

PROCEDURE:

Visualize the vocal cords, using appropriate technique for selected laryngoscope blade.
Repeat suction as necessary; remove foreign bodies with Magill forceps.
Maintain visualization of the vocal cords and insert the tube into the trachea until the cuff is situated just below the vocal cords.
- Cricoid pressure may assist with visualization of the cords. It may also assist with the control of regurgitation by occluding the esophagus.
- Intubation may be attempted a maximum of three times.
- The patient should be ventilated between each attempt.
- Each attempt may take no longer than 30 seconds.

Remove the laryngoscope and stylet.
Hold the tube in the correct position (approximately 22 cm mark at the teeth) by grasping it firmly in one hand. The tube is to be secured in this position.
Inflate the cuff with 10 ml air.
Ventilate the patient with 100% 02 by means of a bag valve breathing device or 40 L/min resuscitator.
To evaluate tube placement:
- Observe for bilateral rise and fall of the chest.
- Auscultate breath sounds bilaterally and over the stomach.

Connect the Toomey syringe (esophageal detector device) to the endotracheal tube and exert steady pressure. Withdraw 30 cc of air.
- If no resistance, tube is in the trachea.
- Resistance to suction or rebound down toward or to zero mark after release of syringe plunger indicates esophageal intubation.

If tube is in trachea, proceed with ventilation.
If the tube is in the esophagus, remove and begin procedure again.
Insert an oropharyngeal airway or bite block if required.
Secure the tube in place at about the 22 cm mark at the teeth by use of an ET tube holder and/or tape.
Reassess the tube position frequently during the call, each time the patient is moved or the tube is manipulated.
- Observe continuously for bilateral rise and fall of the chest.
- Auscultate breath sounds bilaterally and over the stomach.
- Check the centimeter marking at the level of the incisors and compare with initial marking.
- Test placement of tube with esophageal detector device.

DOCUMENTATION:

Documentation shall include:
Bilateral breath sounds after insertion.
Verification that esophageal detector device indicated tracheal position.
Size of ET tube.

Certification # of medic inserting tube.
Time of insertion.
Number of attempts required.
Any procedural problems or complications.

PROBLEM SOLVING:

Mainstem Bronchus Intubation:

– Breath sounds decreased or absent on the one side (usually left).
Withdraw the tube 1 cm.
Auscultate bilateral breath sounds.
Repeat until breath sounds are equal bilaterally or until the 22 cm marking on the tube is at the level of the incisors.
Secure the tube.

Esophageal Intubation:

– Bilaterally diminished or absent breath sounds, failure of the chest to rise and fall, abdominal rise and fall with ventilation, abdominal distention, or epigastric sounds with each ventilation, strongly suggest esophageal intubation.

NOTE: Any or all of these signs may be absent, especially in the frail and elderly patient.
Extubate immediately and ventilate with 100% oxygen.
Consider re-intubation with either ET tube or Combitube.

Dislodgement:

– Diminished or absent breath sounds, absence of chest excursion.
Extubate immediately and ventilate with 100% oxygen.
Properly secure the tube with an ET tube holder and/or tape to prevent dislodgement.
Disconnect the ventilation device whenever it is necessary to interrupt ventilations - i.e.: defibrillation, cardioversion, transfer of patient to gurney, ambulance, etc. to prevent dislodgement.
When moving the patient, manually secure ET tube.

Emesis:

Suction.
Consider placement of a Combitube for large amounts of passive regurgitation.

EXTUBATION:

Indications:

– Failure to ventilate, including:
Failure of the chest to rise.
Absent breath sounds bilaterally or abdominal distention without breath sounds.
Esophageal intubation.
Malfunctioning equipment (i.e.: cuff leak).
– Patient actively resisting and/or gagging on tube (SO)

Procedure:

– Suction oropharynx.
– Oxygenate the patient.
– Turn the patient's head or log roll entire body to the side.
– Be prepared to suction; anticipate emesis.
– Deflate the cuff.
– Withdraw the tube on exhalation.
– Monitor patient's respiratory status and intervene as necessary.
– Provide supplemental oxygen.

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APPROVAL:

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