Solano County Health & Social Services Department

Mental Health Services
Public Health Services
Substance Abuse Services
Older & Disabled Adult Services

Patrick O. Duterte, Director

Eligibility Services
Employment Services
Children's Services
Administrative Services

EMERGENCY MEDICAL SERVICES AGENCY
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Michael A. Frenn
EMS Agency Administrator

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POLICY MEMORANDUM 6601

DATE: February 14, 2005

REVIEWED/APPROVED BY:

STEVEN P. WHITELEY, M.D., EMS MEDICAL DIRECTOR

MICHAEL A. FRENN, EMS AGENCY ADMINISTRATOR

SUBJECT: COMBITUBE

AUTHORITY: California Health & Safety Code §1797.220

I. INTENT

To offer an effective back up airway to endotracheal intubation. The preferred method of airway control is oral endotracheal intubation. In the event that the paramedic is unable to secure an airway by oral endotracheal intubation the Combitube is the back up airway device.

II. EDUCATION AND TRAINING:

Each agency shall provide Combitube training per the manufacturer's recommendations. All ALS providers will conduct annual training with the Combitube device.

III. INDICATIONS FOR USE:

A. Cardiac and/or respiratory arrest **and**

B. Not more than two (2) attempts at endotracheal intubation.

IV. CONTRAINDICATIONS FOR USE:

A. Known esophageal disease.

B. Ingestion of caustic substances.

C. Positive gag reflex.

D. Burns involving the airway.
E. Persons under 4 feet in height.
F. Presence of a tracheostomy or stoma.

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V. RELATIVE CONTRAINDICATIONS:

A. Foreign body airway obstructions.
B. Anatomical disruption of the oropharynx.
C. Hypoglycemia
D. Narcotic Overdose
F. Severe facial/oral trauma

VI. EQUIPMENT:

A. A complete Combitube kit of the appropriate size for the patient;
B. 100 + cc syringe.
C. 20 cc syringe;
D. Water soluble lubricant;
E. Stethoscope
F. Portable suction;
G. BVM;
H. PPE (Personal Protective Equipment)

VII. INSERTION PROCEDURE:

A. For patients 4 feet to 5 feet 6 inches, use the Combitube SA (short adult). For persons 5 feet and taller use the standard Combitube.
B. Inflate and test each cuff, then deflate.
C. Lubricate Combitube with water soluble lubricant;
D. Hyperventilate patient;
E. Place the head in a neutral position;

F. Insert Combitube in the midline of the patient using a downward curved movement. Advanced until front teeth or alveolar ridges are between the black rings on the Combitube. Do not force the tube. A laryngoscope may be used to lift the tongue and jaw if desired.

G. Inflate pharyngeal cuff with a 100ml of air (85ml for Combitube SA). The Combitube may move slightly as it seats in the pharynx – this is normal. Additional air may be inserted if needed to seal the airway during ventilation.

H. Inflate the distal cuff with 15 ml of air (12ml for Combitube SA).

I. Begin ventilations with a BVM device using the #1 port. Auscultate the patient's lung sounds. If auscultation reveals presence of breath sounds and the absences of gastric sounds continue ventilations via the #1 port. Emesis may issue from the #2 port. Reassess airway seals.

J. If auscultation reveals absence of breath sounds and presence of gastric sounds immediately begin ventilations via port #2. Reassess breath sounds and airway seals.

K. Confirm tube placement by using an approved confirmatory device, such as an end tidal CO_2 detector. Response to confirmation may be slower than ET intubation.

L. Secure the tube and ventilate the patient with a BVM attached to 100% Oxygen.

M. Reevaluate the Combitube's position each time after the patient moves to ensure the proper placement of the tube.

VIII. POTENTIAL COMPLICATIONS

A. Subcutaneous emphysema;

B. Perforated esophagus or trachea;

C. Retropharyngeal perforation

IX. TROUBLESHOOTING AND ADDITIONAL INFORMATION

A. Most unsuccessful placements relate to failure to place the tube in midline during placement.

B. If placement is unsuccessful, remove tube, ventilate via BVM and repeat the sequence of steps.

C. If no breath sounds are heard with ventilation through tube #1 or tube #2, it is possible that the tube has been placed too far into the pharynx. Deflate #1 pilot balloon and retract 2-3 cm, then reinflate cuff. Recheck lung sounds.

D. Medications can only be given if the tube is placed into the trachea. Medications should not be administered with esophageal placement.

E. Cuffs can be lacerated by broken teeth or dentures. Remove dentures before placing the tube.

X. CONTINUOUS QUALITY IMPROVEMENT

A. Any adverse outcomes will be reported by Unusual Occurrence to the Medical Director of the Program, the Program CQI Coordinator and the EMS Agency within 24 hours. These calls will be investigated and the outcome of the investigation will be reported to the CQI Committee. The information to be reported is: Date of occurrence, the nature of the adverse outcome, what can be done to prevent the problem again.

B. The ALS Provider will report at the CQI Committee Meeting the number of uses of the Combitube in the month and the circumstances surrounding the use.

C. The ALS Provider will track individual paramedic statistics for use of the Combitube. This information will be available for the EMS Agency to review when requested.

D. The ALS Provider will maintain records which show whether or not a paramedic has undergone training in the use of the Combitube. These records will be sent to the EMS Agency at the end of a calendar year, to be received no later than the last day of January of the new year.

E. The ALS Provider will provide annual training for use of the Combitube to ensure paramedic competency. The training can be a subset of other airway training. It will include a skills demonstration of the Combitube by the paramedic.

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