

Endotracheal Intubation: The Minimum for ACLS Airway Management Training

Arthur J. Rubens, MD

The management of the airway and the delivery of oxygen are essential during respiratory and/or cardiopulmonary arrest. It should be a prime concern of emergency care providers, and must take precedence over everything but safety.¹

Endotracheal intubation is the optimal method for securing and protecting the airway in the compromised patient.²⁻¹¹ In 1975, the American Heart Association (AHA) developed specific standards for the instruction and subsequent certification of Advanced Cardiac Life Support (ACLS) airway management skills.² The AHA instructs endotracheal (ET) intubation for airway management. Although there are several alternative methods and devices for maintaining a patient's airway besides ET intubation, the AHA incorporates the instruction of Esophageal Obturator Airway (EOA) or Esophageal Gastric Tube Airway (EGTA) as its alternative for airway management.^{4,6,8,12,13}

The initial perceived disadvantages with the instruction of ET intubation were difficulty in training paramedics and the possible complications associated with its use.⁸ Recent studies have indicated that the didactic training time for EOA/EGTA is 3.0 hours compared to 4.5 hours for endotracheal intubation, and that the clinical practice times were 1.0 and 2.5 hours respectively.⁵ Several studies have demonstrated that ET intubation can be performed in the prehospital setting and with complication rates no greater than EOA or EGTA insertion.¹⁴⁻¹⁶ Although the EOA/EGTA has been used in more than two million resuscitation attempts,⁸ several studies have shown a lack of effectiveness in prehospital ventilatory management following cardiac arrest.^{10,17} The EOA/EGTA is considered to be inferior to endotracheal intubation in field resuscitation of victims of cardiac arrest,⁹ and should be considered only as an alternative to endotracheal intubation, when ET intubation is not possible.¹¹

In the past decade, much research and interest has been directed toward ways to reduce the occurrence of sudden death due to coronary heart disease. Much of this funding has gone toward the training and education of both laypersons and professionals in basic and advanced cardiac life support respectively.¹⁸ Some of this funding has gone to emergency medical systems for the development of a trained technician (Emergency Medical Technician-Defibrillation; EMT-D) to respond to the most frequent fatal arrhythmia of sudden death, ventricular fibrillation.¹⁸ In 1983, the Advanced Coronary Treatment (ACT) Foundation assembled its medical advisory board to review the available data from clinical experiences with the EMT-D.¹⁹ Much of the research demonstrated that the

early use of the defibrillator by EMTs significantly improved survival from cardiac arrest.^{20,21}

Much like the upgrade of the EMT to EMT-D in certain communities, the instruction of ET intubation could be presented to the EMT. This training could replace the regular, periodic instruction for the EMT in EOA/EGTA insertion. The instruction and subsequent certification could be provided in a standardized ACLS course, with the EMT receiving a study packet and attending lectures and teaching stations on "airway adjuncts and intubation." More emphasis could be applied to the instruction of ET intubation, and the procedures of EOA/EGTA insertion could be phased out of the standardized ACLS course on airway adjuncts and intubation, and EMT training curriculum.

More research should be conducted into this concept of instructing solely ET intubation, and the subsequent impact that it would have on communities that now only have BLS capabilities and manage the compromised airway with EOA/EGTA insertion. Additionally, the idea of medical control over these new technicians would need to be explored.

There was a time, when it was felt that one could not train a prehospital care provider in the skills necessary to perform advanced life support. Today, the impact of this training is well known to both the public and medical community. The EMT/paramedics have changed the course of prehospital and emergency care delivery. Their capabilities and skills are acknowledged and accepted. Nationally, many communities can not afford to support an ACLS system.

Conclusion

The EOA and EGTA have served their purpose for many years. Maybe the time has come to put aside these instruments. Many metropolitan communities already have done this. Perhaps, it is time that available resources were looked at to design ways that could improve training methods and more cost-effective use of EMTs.

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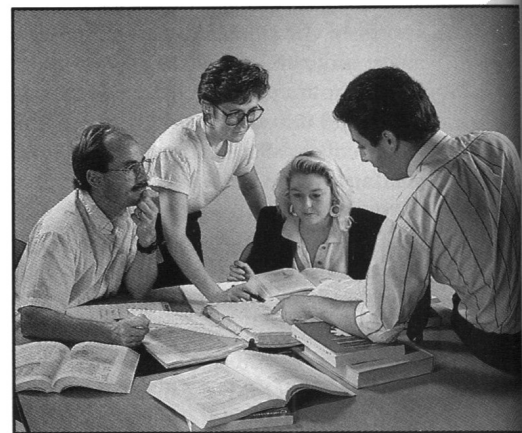
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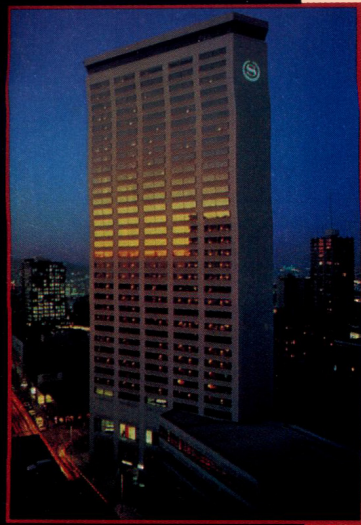
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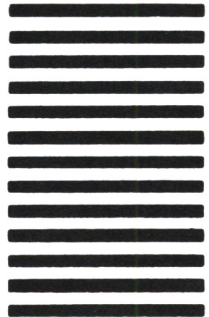
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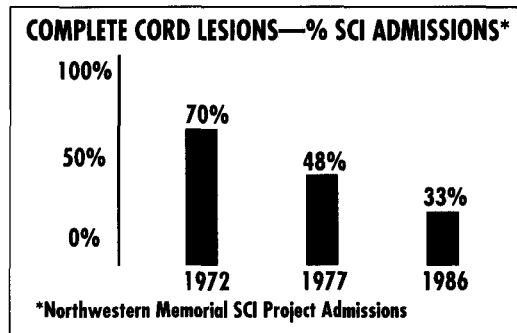
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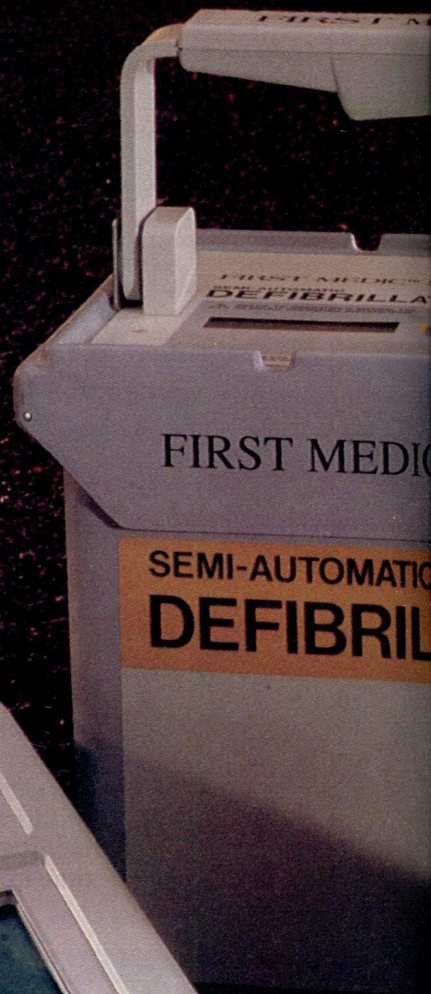
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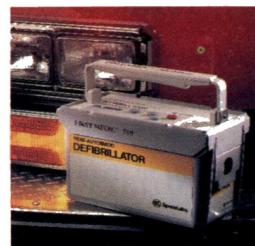


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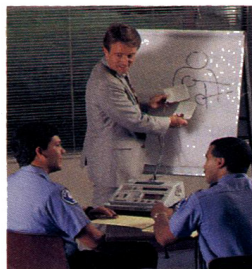


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