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Title

Emergency Medical Services Personnel Compliance with Escalating Airway Algorithm Protocol

Priority 1 (Research Category)

Acute and emergency care

Presenters

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Abstract

Introduction. When emergency medical services (EMS) personnel respond to emergencies, the decisions they make often can mean life or death for the patient. This is especially true in the case of advanced airway management. Protocols are set in place to ensure that the least invasive airway management techniques are used initially before more invasive techniques. The purpose of this study was to determine how often EMS personnel followed this protocol, while adequately achieving the goals of appropriate oxygenation and ventilation.

Methods. This retrospective chart review was approved by the Institutional Review Board of the University of Kansas Medical Center. The authors reviewed the Wichita/Sedgewick County EMS system for cases during 2017 in which patients required airway support. We examined de-identified data to determine if invasive methods were applied in sequence. Cohen's kappa coefficient (κ) and immersion-crystallization approach were used to analyze the data.

Results. A total of 279 cases were identified in which EMS personnel used advanced airway management techniques. In 90% (n = 251) of cases, less invasive techniques were not used prior to more invasive techniques and in 80% (n = 222) of cases, the more invasive technique was used alone. A dirty airway was the most common reason for the EMS personnel's choice of using more invasive approaches in achieving the goals of appropriate oxygenation and ventilation.

Conclusions. Our data showed that EMS personnel in Sedgwick County/Wichita, Kansas often deviated from the advanced airway management protocols when caring for patients in need of respiratory intervention. Dirty airway was the main reason for using a more invasive approach in achieving the goals

of appropriate oxygenation and ventilation. It is important to understand reasons why deviations in protocol were occurring to ensure that current protocols, documentation, and training practices are effective in producing the best possible patient outcomes.