

Citation

Peterson GN, Posner KL, Domino KB, Lee LA, Cheney FW: Management of the Difficult Airway in Closed Malpractice Claims. *Anesthesiology*, 99: A1252, 2003.

Abstract

Introduction

We analyzed claims in the American Society of Anesthesiologists Closed Claims Project database to assess airway management factors associated with adverse outcomes from difficult intubation. Since the 1993 adoption of the ASA Difficult Airway Algorithm, a supplemental data form was used to collect specific data about the provider's performance at each stage of the Difficult Airway Algorithm.

Methods

The process of airway management in 159 difficult airway claims among the 2190 claims reviewed since the 1993 adoption of the Difficult Airway Algorithm was evaluated. We compared difficult airway claims resulting in death or brain damage with difficult airway claims resulting in less severe outcomes. Statistical analysis was performed using the Z test (proportions) and the Kolmogorov-Smirnov Test (payments).

Results

Of the 159 difficult airway claims, 137 (86%) involved peri-operative airway management in the operating room (OR) or PACU and 22 (14%) were in non-anesthetizing locations. Among the 137 peri-operative difficult airway management claims, problems occurred during induction in 66%, intraoperatively in 15%, and during extubation in the OR in 11% (Figure 1). Death or brain damage occurred in 100 (63%) of the 159 difficult airway claims. Injuries in the remaining 59 claims were mostly temporary non-disabling injuries (88%) and included airway injuries (n=42), pneumothorax (n=7), and aspiration pneumonitis (n=3). Nearly all difficult airway claims from non-OR/PACU locations resulted in death or brain damage (95%) compared to perioperative difficult airway claims (58%, $p<0.01$). There was little difference in anticipation of airway problems between the 100 death or brain damage claims and the 59 claims with less severe outcomes (Figure 2). Difficult mask ventilation and an emergency "can't intubate and can't ventilate" situation were more common in death or brain damage claims, as were persistent intubation attempts ($p<0.01$, Figure 2). Payment was made to the plaintiff in 66% of difficult airway claims, with no difference between injury groups. Death or brain damage claims had higher payments (median \$400K) compared to less severe injury claims (median \$50K, $p<0.01$).

Figure 1

Perioperative Difficult Airway Management

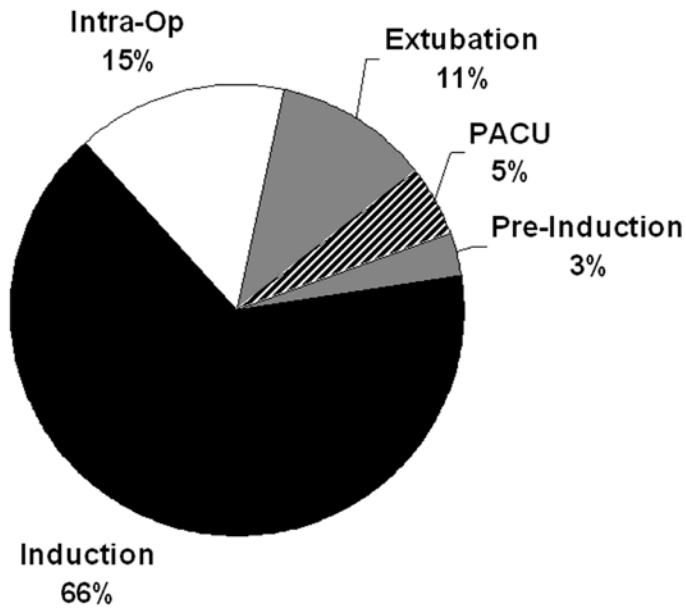
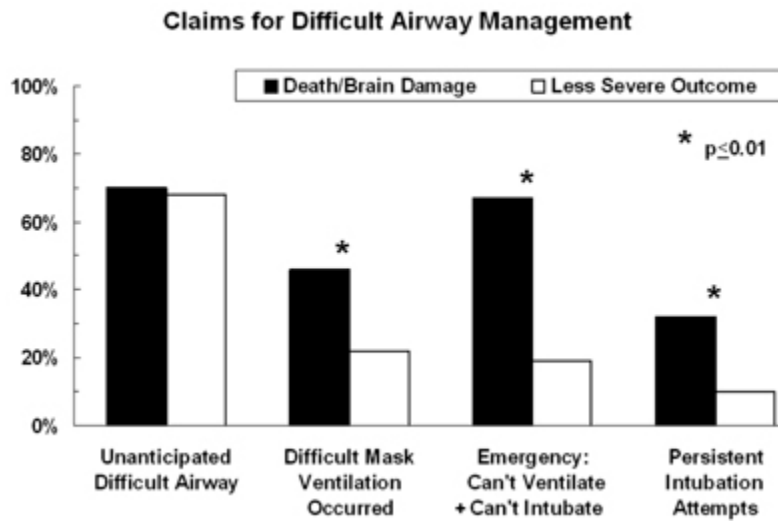


Figure 2



Conclusion

Death and brain damage were more common in difficult airway claims arising from non-OR/PACU locations. Severe outcomes were more common in the setting of difficult mask ventilation, "can't intubate/can't ventilate", and persistent intubation attempts.

A copy of the full text can be obtained from the American Society of Anesthesiologists, 520 N. Northwest Highway, Park Ridge, Illinois 60068-2573. Reprinted with permission of [Lippincott Williams & Wilkins](#).