

Management of the anticipated difficult airway—a systematic approach: Continuing Professional Development

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Abstract

Purpose *The purpose of this Continuing Professional Development module (CPD) is to update clinicians regarding a systematic approach for anticipated difficult airway management.*

Principal findings *The focus of the approach should be directed towards providing adequate oxygenation and ventilation and not necessarily intubating the trachea. The purpose of preoperative airway assessment is not only to detect possible difficult direct laryngoscopy, but also to evaluate the probability of effective ventilation using supraglottic airway devices, such as the oropharyngeal airway or the laryngeal mask airway. Predicting the degree of difficulty with direct laryngoscopy or ventilation with a supraglottic device remains an imperfect science, and the experience of the anesthesiologist plays an important role in the clinical decision-making process. When a difficult airway is anticipated, the need for tracheal intubation should be carefully assessed. If tracheal intubation is deemed non-essential, the role of a supraglottic device should be considered. If adequate management with a supraglottic device is unlikely, then intubation is indicated with the patient awake. In certain cases, a sevoflurane induction may be chosen to test the efficacy of a supraglottic device while simultaneously maintaining spontaneous ventilation. If tracheal intubation is required, a supraglottic device may be used as a bridge during induction of anesthesia and may even be used to insert the tracheal tube. The choice of either the supraglottic device or another aid to intubation depends essentially on the anesthesiologist's experience.*

Conclusion *Airway management should be approached systematically, always keeping in mind the importance of uninterrupted oxygenation and ventilation, especially when difficulties are anticipated. Supraglottic devices can play an important role in the management of the difficult airway, whether used for the duration of surgery or inserted as an aid to intubation.*

Continuing Professional Development module objectives

After reading and completing this module, the anesthesiologist should be able to:

1. Use a systematic approach for airway management;
2. Identify certain characteristics associated with a difficult airway;
3. Be aware of the importance of evaluating potentially difficult direct laryngoscopy and identify the potential for difficult ventilation with a supraglottic airway;
4. Suggest solutions for airway management in a patient with a history of difficult tracheal intubation; and
5. Define the role of different instruments for airway management.

A difficult airway may occur unexpectedly. However, this Continuing Professional Development (CPD) module focuses on the recognition and management of the *anticipated* difficult airway in adult patients. Although many principles outlined herein may apply to cases of *unanticipated* difficulties with oxygenation, ventilation, or tracheal intubation, the reader should refer to other standard references addressing these issues for a detailed review of these scenarios.

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