

Extraglottic Airways

Darren Braude, MD, EMT-P
Professor of Emergency Medicine and Anesthesiology
EMS Section Chief and Fellowship/Consortium Director
National Medical Director, *The Difficult Airway Course: EMS*
Author, *Rapid Sequence Intubation & Rapid Sequence Airway*,
2nd Edition: *an Airway911 Guide*

Terminology

- Extraglottic airway
- Extraglottic device
- Supraglottic airway
- Infraglottic airway
- Retroglottic airway

History





Device	Peds	Gastric Decompress	Blind Intubation	Fiberoptic Exchange
Combitube	4 ft	+	-	-
EasyTube	3 ft	+	-	-
King LTS-D	12kg/3 ft	+	- (Bougie?)	+/-
LMA-Unique	ALL	-	-	+
LMA-Supreme	ALL	+ (all sizes)	-	+/-
LMA-Fastrach	30 Kg	-	+	+
iGel	ALL	+ (except neo)	-	+
AirQ; AirQ, Blocker, sp	ALL	>30 kg (Blocker)	+/-	+
Ambu	ALL	-	-	+

- ### Roles for EGDs in EMS
- Primary airway
 - BLS/ILS
 - ALS?
 - Unusual patient positioning
 - Cardiac arrest
 - RSA
 - Secondary device for missed airway

Controversies

- Aspiration protection
- Cerebral perfusion
- ETI skill maintenance
- Facilitated gastric tube placement BLS/ILS
- Paralytics with EGD
- Vent with EGD
- RSA
- ED continuance

Aspiration Protection

- Many of these devices offer more protection than many realize, especially with gastric decompression
- If ETI comes with other potentially serious complications, is the avoidance of a potential complication that has possibly already occurred, and may or may not result in serious harm, worth the risk?

A Comparison of Seal in Seven Supraglottic Airway Devices Using a Cadaver Model of Elevated Esophageal Pressure

RESULTS: The Combitube, Easytube, and intubating laryngeal mask Fastrach withstood the water pressure up to more than 120 cm H₂O. The laryngeal mask airway ProSeal, laryngeal tube, and laryngeal tube LTS II were able to block the esophagus until 72–82 cm H₂O. The classic laryngeal mask airway showed leakage at 48 cm H₂O, but only minor leakage was found in the trachea. Devices with an additional esophageal drain tube drained fluid sufficiently without pulmonary aspiration.

Stevn Beckler, MD^a (AMER ANJG 2006;130:645-6)
 Will Schmittbauer, MD^b
 Thomas Vitek, MD^c
 Gerfried Roggach, PhD^d
 Hans Peter Hubner, MD^e
 Marco Hensel, MD^f
 Therafil Korner, MD^g

AIRWAY911

Local Aspiration Data

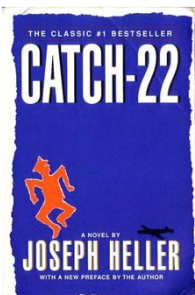
- ETI: 15% (n=94)
 - 3/14 noted blood/emesis in airway at insertion
 - Eliminate these 3 then 11/91 or 12%
- EGA: 19% (n=67)
 - 8/13 noted blood/emesis in airway at insertion
 - Eliminate these 8 then 5/59 or 8%
 - Apx 1/3rd Combitube, 1/3rd LMA-Supreme, 1/3rd LMA-Uniquest

AIRWAY911

Cerebral Perfusion

- EGDs decrease CPP in swine during CPR
- Effect of EGDs on CPP in humans unknown but no obvious mechanical compression
- No clinically significant difference in neuro outcome in human OHCA trials

EGD usage decreases ETI success



- Does this matter if EGDs working?
- Change approach to ETI through EGDs
- I allow medics single attempt at ETI prior to EGD (with CPR in progress)

Gastric tube placement

- New Mexico 2010 Scope of Practice allows EMT-Basics and above to place gastric tube through EGD channel designed for such insertion as part of using device per manufacturers recommendations

Paralytics and Vent with EGD?

- We do it all the time
- There are probably thousands in OR right now

RAPID SEQUENCE AIRWAY (RSA)– A NOVEL APPROACH TO PREHOSPITAL AIRWAY MANAGEMENT

Darren Braude, MD, EMT-P, Michael Richards, MD, MPA

ABSTRACT

This article presents a case in which an air medical flight crew encountered a potentially difficult airway when a trauma patient deteriorated in-flight. The crew elected to sedate and paralyze the patient and place a laryngeal mask airway without a prior attempt at direct laryngoscopy and endotracheal intubation. The term Rapid Sequence Airway (RSA) is coined for this novel approach. This article describes and supports this concept and provides definitions of alternative and failed airways. **Key words:** prehospital; airway management; air medical.

PREHOSPITAL EMERGENCY CARE 2007;11:250–252

ED Usage/Continuance

- If you rush to take them out when they are working or fail to utilize them early in cannot intubate scenarios how can you expect your crews to embrace them?
- LMA Supreme 9-hour case

Take Home Points

- No one perfect EGD for EMS
 - I prefer devices with gastric decompression
 - I prefer one device for adults and pediatrics
- More aspiration protection than you might suspect
- CPP effect unproven - reason to think it is not an issue
- Consider BLS/ILS placement of gastric tube thru EGD
- Don't rush to remove them!
