Airway management course: Difficult airways

Matthew R. Gingo, MD, MS
Difficult airway outline

- Recognizing difficult to intubate and ventilate
- Difficult airway algorithms
  - Difficult, crash, failed
- Tools to use:
  - LMA, bougie, bronchoscope
  - Others like optical stylets, combitube
- When to call for help:
  - Anesthesia, surgery or ENT, emergent cric or trach
This is no fun!!!
Difficult airway – how to anticipate

- Difficult airway can mean difficulty at various levels:
  - Difficult for laryngoscopy
  - Difficult to bag (BMV)
  - Difficult for extra-glotic devices
  - Difficult to cricothyroidotomy
Difficult laryngoscopy

LEMON

• L - look externally
Difficult laryngoscopy

- L - look externally
- E - evaluate 3-3-2
Difficult laryngoscopy

- L - look externally
- E - evaluate 3-3-2
- M - Mallampati score
Difficult laryngoscopy

- L - look externally
- E - evaluate 3-3-2
- M - Mallampati score
- O - obstruction/obesity
Difficult laryngoscopy

- L - look externally
- E - evaluate 3-3-2
- M - Mallampati score
- O - obstruction/obesity
- N - neck mobility
  - Keep Rheumatoid Arthritis in mind
Difficult laryngoscopy

- L - look externally
- E - evaluate 3-3-2
- M - Mallampati score
- O - obstruction/obesity
- N - neck mobility

Other situations:
- Upper airway or GI bleeding (hematemesis)
- Vomiting
- Total laryngectomy – can’t intubate
Difficult BMV

MOANS

• M – Mask seal, male sex, Mallampati
• O – obesity/obstruction
• A – age – due to loss of upper airway muscle tone
• N – no teeth – makes mask hard to fit
• S – stiff/snoring – lung disease or hx of sleep apnea
Difficult extraglottic device (EGD)

RODS
- R – Restricted mouth opening
- O – Obstruction/obesity
- D – Disrupted or distorted airway
  - Ex. laryngeal hematoma, epiglottitis
- S – Stiff
Difficult cricothyrotomy

SMART
• S – surgery
• M – mass
• A – access/anatomy
• R – radiation (or other neck deformity/scarring)
• T - tumor
Avoid creating a difficult airway

• Avoid creating difficulty when there isn’t any to begin with:
  – Incorrect positioning
  – Failure to check equipment
  – Failure to sedate/paralyze appropriately
  – Multiple laryngoscopy attempts
Airway algorithms

• Crash airway: impending death/apneic/agonal; patient unlikely to respond to laryngoscopy

• Difficult airway: identified by the assessments just described

• Failed airway:
  1) “can’t intubate, can’t oxygenate” (CICO);
  2) or three failed attempts by an experienced operator.
Crash airway

- Apneic/comatose patient
Difficult airway

- **Laryngoscopy**
  - LEMON
- **BMV**
  - MOANS
- **EGD**
  - RODS
- **Cric**
  - SMART
Failed airway

1) “can’t intubate, can’t oxygenate” (CICO);
2) or three failed attempts by an experienced operator.
Other tools

- LMA – laryngeal mask airway
- King combitube
Other tools

• The Bougie
  – Can help with glottic view is less than optimal

Another good video:
https://www.youtube.com/watch?v=qcDXZgV3m8I
Other tools

• Video laryngoscopes
  – Glidescope
  – McGrath MAC

• Optical stylets

• Flexible endoscopic intubation (fiberoptic bronchoscope)
Awake intubation

• When you anticipate:
  – Difficult laryngoscopy
  – Difficult to bag
  – Difficult to EGD
• Patient awake and breathing
  – Maintaining their own airway
• Topical anesthetic
• Fiberoptic guidance
• Can be done sitting up
When to call for help:

• That is easy:
• Whenever help is available!
• Anticipation of difficult airway:
  – Anesthesia
  – Surgery or ENT for cric or trach
Reference:


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