

Gastric Aspiration and Challenging Intubation

CASE STUDY

McGRATH® MAC enhanced direct laryngoscope (EDL)

SUBMITTED BY:

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The case demonstrates the successful use of the McGRATH® MAC enhanced direct laryngoscope (EDL) in a super morbidly obese adult with lost airway and acute aspiration of gastric contents. This was a truly emergent “can’t ventilate, can’t intubate, lost airway” clinical situation in which the McGRATH® MAC EDL was effective when other devices had failed.

Case History

Procedure: Planned arthroscopy

Patient: Super morbidly obese adult, BMI>50, presents for arthroscopy for knee pain, denies gastroesophageal reflux disease (GERD), obstructive sleep apnea and other comorbidities

Airway: Class III, 3 FB TMD.

Intraoperative Events

- Patient was transported to OR with anesthetic plan involving laryngeal mask airway (LMA) insertion
 - Preoperative medications: Versed 2 mg IV for anxiolysis and amnesia
 - Supine position with foam headrest
 - **Induction:** Fentanyl 100 mcg IV, lidocaine 100 mg IV and propofol 150 mg IV.
- **Intubation:** Immediately upon induction, patient vomited and aspirated green bilious gastric contents. Suction was quickly applied.
 - Anesthesiologist attempted intubation with a Macintosh 3 laryngoscope with a Grade IV view, which was further obliterated by gastric contents in oropharynx.
 - » *After unsuccessful intubation, the anesthesiologist switched to a video laryngoscope, but was unsuccessful in obtaining a view of the vocal cords or arytenoids.*
 - » *Insertion of LMA was unsuccessful. Bag/valve/mask ventilation was also unsuccessful. Oxygen saturation~50% and dropping.*

- At this time, assistance was requested from a second anesthesiologist, with the patient's O₂ saturation now registering <20%. The primary anesthesiologist stated that no view was afforded with the first video laryngoscope model.
 - » *The second anesthesiologist was carrying the portable handheld McGRATH® MAC EDL. To optimize the view, since external auditory canal was far below the sternal notch, HELP (head elevated laryngoscopy position) was considered. However, due to the patient's dangerously low SpO₂ level, the primary anesthesiologist elected to proceed with intubation attempt despite non-optimal position.*
- The oropharynx was suctioned and the clinician used the McGRATH® MAC EDL with #4 disposable blade. This afforded an immediate Grade I view, with the lower half of the vocal cords and arytenoids noted. Intubation required only mild clockwise rotation of the ETT and was successful as evidenced by positive etCO₂ in the 70s, chest rise and fall, moderate increase in blood saturation and bilateral distant breath sounds.

- **Post-intubation:** Ventilation was initially difficult with large amounts of gastric contents in the ETT. Suction improved compliance but difficulty persisted, which led to consideration of esophageal rather than tracheal intubation. Oxygen saturation remained below 90% due to aspiration and gastric contents in upper airways.

Resolution

The patient stayed in ICU intubated for 24 hours postoperatively with ventilator management by a pulmonologist. Fortunately, the patient did not develop any signs or symptoms of acute respiratory distress syndrome (ARDS) and was safely extubated within 24 hours. The patient was sent to the surgical post-op unit and later discharged to home. The patient was instructed to reschedule at a later date for planned knee arthroscopy.

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MAC



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