FEEDBACK TO THE FIELD (FT2F) #15:
Supraglottic Airway Device Observations*

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Original Issue

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CASE STUDY:

- Based on autopsy at the Office of the Armed Forces Medical Examiner (OAFME), Dover AFB
- Medical intervention included a supraglottic airway device that had not been previously encountered

- Postmortem computed tomography (CT) revealed the device positioned over the tracheal inlet (arrow) with the tip in the proximal esophagus (arrowhead)
CASE STUDY:

- The device was removed after imaging and was shown to be an i-gel™ supraglottic airway*
CASE STUDY:

Front View

Back View
CASE STUDY:

- The device has two lumens (yellow strip markers): One for air to the trachea (●) and one for passage of a gastric tube (♦)
CT VIEWS OF IN-SITU POSITIONING:
Axial sections cephalo-caudad
CT VIEW OF IN-SITU POSITIONING:

• The soft, gel-like, non-inflatable cuff (○) is designed to provide an anatomical, impression fit over the laryngeal inlet (⌒). The tip rests at the esophageal inlet.
• The i-gel is an FDA Class I (510(K) exempt) device typically used in civilian emergency care and anesthesia

• Recent large-scale study results*:
  - 2049 i-gel uses in the everyday clinical setting were analyzed
    - Overall success rate: 95.9%
    - Insertion deemed “very easy” or “easy”: 92%
    - Average airway leak pressure was high: 26 cm H₂O
    - Risk factors for failure: male gender, impaired mandibular subluxation, poor dentition, and old age
    - Adverse events were rare, but included blood stained airway devices (3.9%), laryngeal spasms (1.2%), transient nerve damage (0.1%), one case of transient vasovagal asystole, one case of glottic hematoma

ENTRY INTO DoD MEDICAL SUPPLY SYSTEM:

- Device first evaluated for field use by Marine Corps Systems Command (MARCORSYSCOM). A DoD National Stock Number (NSN) was then requested.
- Defense Logistics Agency (DLA) Troop Support evaluated the NSN request from logistics & engineering perspective.
- Defense Medical Materiel Program Office (DMMPO) evaluated the NSN request from clinical perspective, conducted an extensive literature review, contacted experienced users.
- NSNs were assigned:
  - 6515-01-619-7360: i-gel RESUS, Size 3
  - 6515-01-618-8278: i-gel RESUS, Size 4
  - NSN pending: i-gel RESUS, Size 5
- Device now included in the USMC’s Surgical Trauma Platoon AMAL (AMAL 631-632).
- Navy is leading user of this device; most are anesthesiologists.
SUMMARY & RECOMMENDATIONS:

- i-gel is designed to create a non-inflatable anatomical seal of the pharyngeal, laryngeal, and perilaryngeal structures
  - Uses a blind insertion technique
  - Size is selected based on patient weight
  - Gastric channel provides warning signs of regurgitation, facilitates venting of gas from stomach, and accommodates passing of a suction tube into the stomach

- Device is being used in the field, and the possibility of encountering/using it in-theater is growing
  - Military training centers should include this device in airway management curriculums, and medical providers should be prepared to use the device downrange. A user training video is available at: http://www.intersurgical.com/education
  - Services should perform utilization review of supraglottic airway devices and consider updating Tactics, Techniques & Procedures (TTP)
This material is intended for educational and training purposes. If portions are extracted, the following statement must be included:

“Source: Armed Forces Medical Examiner System and DHA Medical Logistics Division”

NOTES of CAUTION:

• The clinical circumstances and details surrounding emergency treatment in these cases is unknown

• This presentation makes no association between device placement and outcome of treatment

• This case series is drawn from cases with fatal injuries, which may skew data
For FT2F Comments / Questions / Requests:
Contact the Armed Forces Medical Examiner System (AFMES)

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