

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

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** American Registry of Pathology in support of AFMES

DISCLAIMER

The opinions or assertions presented hereafter are the private views of the authors and should not be construed as official or as reflecting the views of the Department of Defense, its branches, the Armed Forces Medical Examiner System or the DHA Medical Logistics Division.

Original Issue

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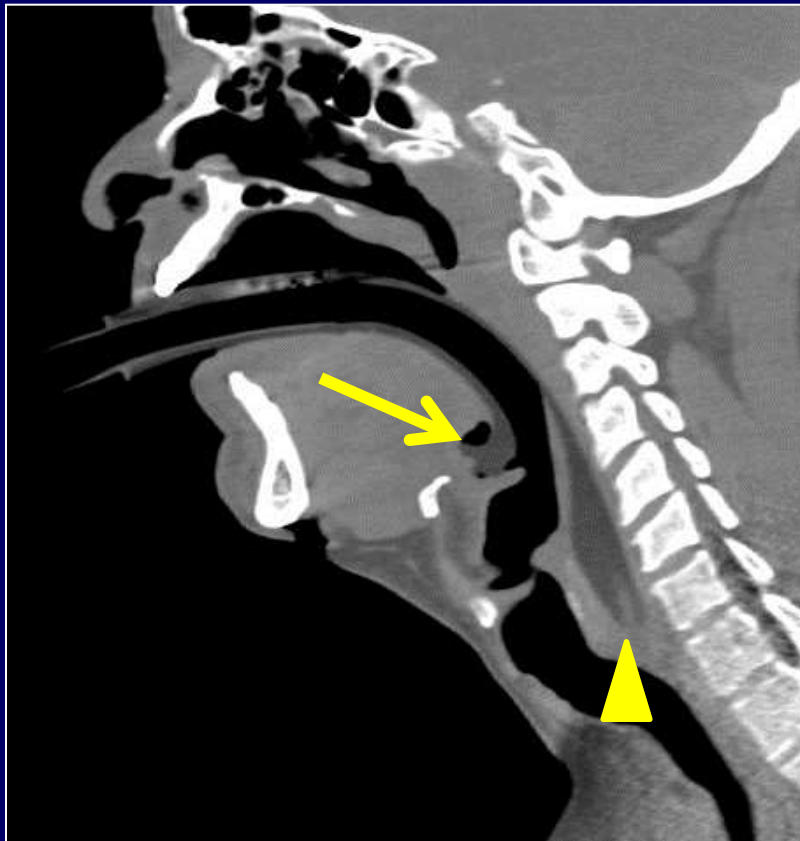
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CASE STUDY:

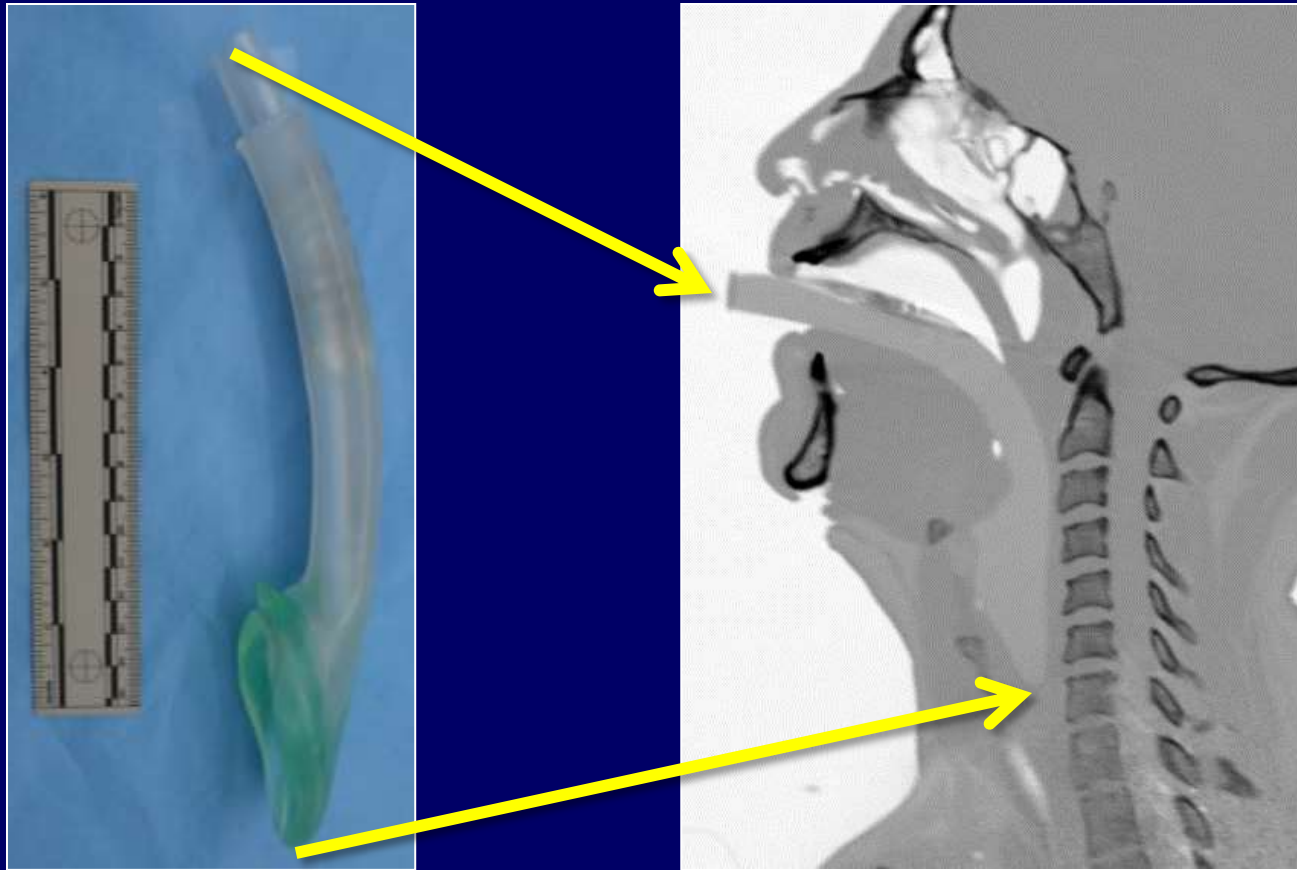
- Based on autopsy at the Office of the Armed Forces Medical Examiner (OAFME), Dover AFB
- Medical intervention included a supraglottic airway device that had not been previously encountered



- 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*



* Intersurgical Ltd, Wokingham, Berkshire, UK

CASE STUDY:



Front View



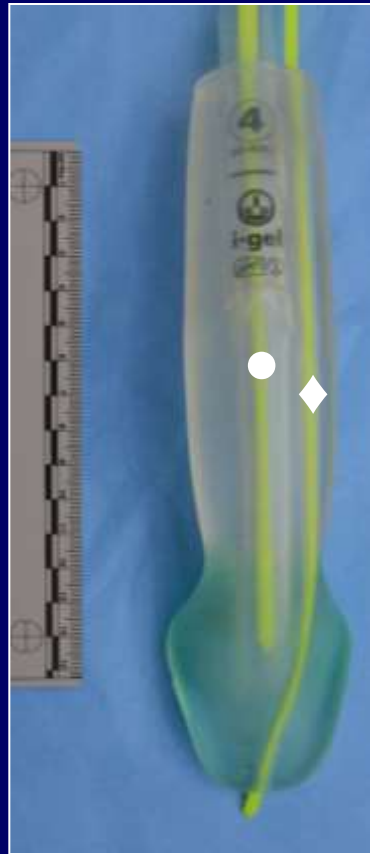
Back View

CASE STUDY:

- The device has two lumens (**yellow strip markers**): One for air to the trachea (●) and one for passage of a gastric tube (◆)

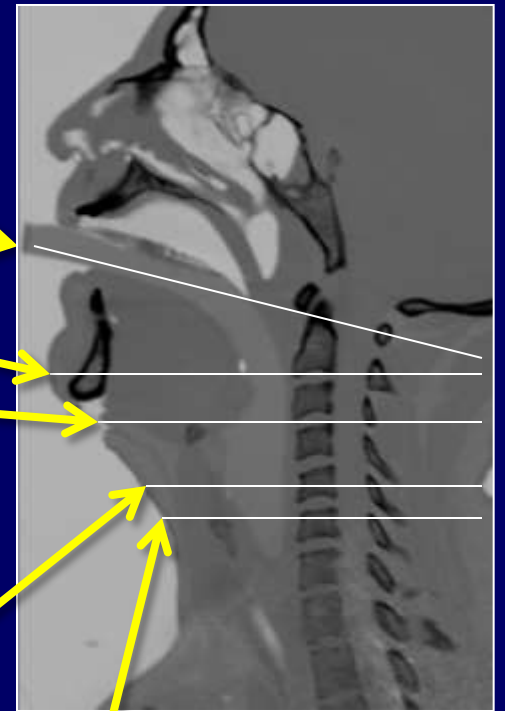
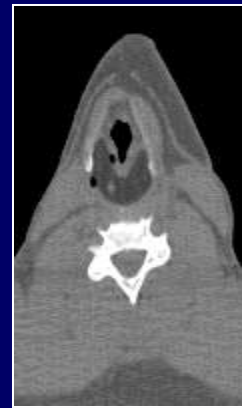


Front View



Back View





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



Coronal View



Sagittal View

REFERENCE:

- 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

* Theiler L, Gutzmann M, Kleine-Brueggeney M, Urwyler N, Kaempfen B, Greif R. i-gel™ supraglottic airway in clinical practice: a prospective observational multicentre study. *British Journal of Anaesthesia* 2012;109(6):990-5. doi: 10.1093/bja/aes309.

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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