Use of a Laryngotracheal Topical Anesthesia (LTA®) 360 Kit as a Stylet for 3.5 and 4.0 Endotracheal Tubes to Facilitate Pediatric Intubations when using the Glidescope® Video Laryngoscope

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Case Description:

Case 1: 17-month old toddler with malrotation without acute volvulus was scheduled for a laparoscopic LADD’s procedure.
- Patient had no loose teeth, full range of motion of neck, and normognathia.
- A LTA® was inserted into a 4.0-cuffed ETT, prior to manually shaping its end into a hockey stick (Figure 1).
- Preoxygenation and IV induction was performed.
- Easy masking was confirmed prior to intubation with the Glidescope® Cobalt/Ranger Blade 2 with the LTA® as the stylet (Figure 2).

Case 2: 5-month old infant with incomplete cleft of the right lip was scheduled for a cleft lip repair.
- Patient had no loose teeth, full range of motion of neck, and normognathia.
- Surgical lubricant was thinly applied to the outside of a LTA® prior to inserting it into a 3.5-cuffed oral RAE ETT and manually shaping its end into a hockey stick.
- Mask induction with confirmation of easy mask was performed.
- PIV was started and rocuronium given.
- Intubation was performed with the Glidescope® Cobalt/Ranger Blade 2 with the LTA® as the stylet.

Discussion:

• The LTA® is readily available in most operating rooms.
• Its diameter and rigid but pliable structure allow it to be easily manipulated by hand alone to hold a shape conducive to being used as a stylet for 3.5 and 4.0 ETTs in conjunction with the Glidescope®.
• Several techniques have been described regarding using LTA®s as stylet-like devices.
• One described technique involves threading the LTA® through the Murphy’s eye of larger ETTs, manipulating the LTA® through the glottis, before threading off the ETT into position for intubation2-7.
• A similar technique to the one presented here describes using a gas stove’s heat to mold the LTA® into the desired hockey stick shape8.
• Our technique omits this step and preserves sterility, since the LTA® is prepared for each patient in the OR prior to intubation.

Conclusion:

• The LTA® as a stylet when used in conjunction with the Glidescope® allows for easy and first attempt intubations of pediatric patients (Figure 3).

References:

4. http://www.youtube.com/watch?v=1DC7R3HoMX4

Background:

• The Glidescope® video laryngoscope is a great tool for known and unanticipated difficult pediatric airways; however, it does not come with a manufacturer ready-made stylet bent at the perfect angle to facilitate endotracheal tube (ETT) intubations with pediatric-sized ETTs.
• The GlideRite® rigid stylet only accommodates ETTs sized 6.0mm and larger1.
• Anesthesiologists often try to shape their styleted-ETTs into a similar shape when preparing for a Glidescope® intubation of an infant.
• Frequently a great view of the glottis is encountered, but the stylet’s angle is off and it cannot be easily manipulated into the glottis without reconfiguring its angle.
• This puts the pediatric patient at risk for multiple trauma, and desaturation.
• Hence, it is vital to try to get the ETT into position smoothly and on the first attempt.
• The described technique below is one way to accomplish these goals.
• Consent to photograph and publish was obtained.

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