SETTI Intubation Solution – Intubate First Time, Every Time with Minimal Tissue Damage

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Patent:
"METHOD FOR RAPID INTUBATION WITH MINIMAL TISSUE DAMAGE"
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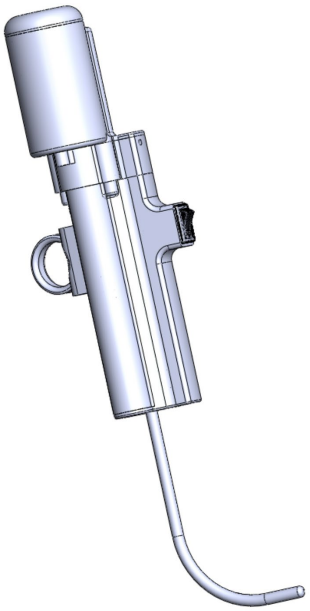
Reference Material:
"*The Difficult Airway: Common Errors During Intubation*", Joshua Boucher, MD, EM Attending Physician, EMS Fellow, Morristown Medical Center, 2016

"*Guidelines for the management of tracheal intubation in critically ill adults*.", Andy Higgs, Anesthesia and Intensive Care Medicine, Warrington and Halton Hospitals, NHS Foundation Trust, 2017

"*Unanticipated Difficult Airway Management in the Pre-Hospital Emergency Setting*." Xavier Combs, MD, 2011

Market Applicability & Uses:
- Anesthesiologists during surgical procedures
- Paramedics when aiding in non-facility caregiving
- Medics in military operations
- Flight attendants during in-flight emergencies

Approximately 25-30 million operations requiring general anesthesia are conducted in the US annually. The nature of these kinds of operations requires relaxation (paralysis) of all the patients' musculature. This is accomplished through the use of a variety of different anesthetic medications. Patients who are rendered unconscious and unable to move require the anesthetist to intervene and establish control of their respiration during the operation to allow continuous oxygenation of the patient's lungs and body beyond.



To mitigate the potential effects of the intubation process on the throat and vocal cords, Cambridge Research & Development (herein CRD) has developed, in collaboration with recognized Anesthesiologist Dr. Madhava Setty, a solution which lessens the impact of potential vocal cord damage by providing the operator (anesthesiologist, EMT, caregiver etc.) the ability to accurately aim and guide an intubation directly through the vocal cords without incident.

Opportunity

Many of the research references provided document the problematic effect of intubation on soft tissue in the throat. Repeated ischemia, resulting from damage to laryngeal mucosa can cause vocal cord paralysis, ulcers or formation of granulation tissue leading to severe pain.

What if, through an improvement to the existing intubation product design, one could either mitigate, reduce or remove vocal cord damage during the intubation process?

Solution – Flexible Distal Tip Design with Insertion Drive Mechanism and Integrated Vision System

The SETTI Solution protects the soft tissue and vocal cords by introducing the goal of "First Time, Every Time" intubation design for highly improved accuracy resulting in greater intubation success.

This is accomplished by combining three factors; distal tip deflection, an insertion drive, and vision componentry. The intubation tube is slid over a guidance arm which is then inserted into the throat of the patient. Once near the vocal cords, the distal end of the guidance arm can be deflected and, when properly positioned, the intubation tube can then be inserted between the vocal cords with the simple press of a button, while assuring minimal impact on surrounding tissue. All of this is aided by an embedded vision system which can be controlled using one hand.

When the intubation process is complete, the SETTI can be removed from the patient and the guidance arm removed so that it can be replaced with a newly sterilized component.

By combining the insertion, guidance, and vision capabilities in one device, the process of intubation can now be achieved using one device, in one hand, operated by both skilled and unskilled users.

Medical Significance:

The introduction of a vision-enhanced, flexible distal tip solution will lessen the time required to stabilize a patient. This is extremely important for professionals dealing with difficult intubation as well as less experienced care givers who intubate less frequently, such as emergency personnel.

As a result, patient survival rates will increase, and institutions will realize a reduction in expenses related to unnecessary legal action.