

INTUBATION DEVICE AND METHOD

CROSS-REFERENCE TO RELATED APPLICATION

This application claims the benefit under 35 U.S.C. § 119 (e) of U.S. Provisional Patent Application No. 60/273,795 filed 5, Mar. 2001, said provisional patent application hereby incorporated by reference, in its entirety, into the detailed description portion of the present application. The incorporated-by-reference provisional patent application has been incorporated into the detailed description portion of the present application because the incorporated-by-reference provisional patent application described aspects of both the related art and the present patent application under a “background information” section; however, the description of aspects of the present patent application under the “background information” section of the provisional patent application is in no way an admission that such related art or aspects of the present invention constituted “prior art”. In fact, several aspects of the present patent application predate the related-art aspects described in the provisional patent application. Accordingly, the foregoing statements constitute public notice that the provisional patent application was intended to contain no admissions related to prior art whatsoever.

STATEMENT REGARDING GOVERNMENT INTEREST

The government has certain rights in this invention.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates, in general, to intubation devices and methods.

2. Description of the Related Art

Intubation is the operation of inserting a tube into an animal’s hollow organ or body passage to keep the organ or body passage open. One common example of intubation is endotracheal intubation, wherein a breathing tube is placed within the trachea of an animal. While endotracheal intubation will be described herein for sake of clarity, it is to be understood that the teachings herein are not limited to endotracheal intubation, but may instead be extended to other types of intubation.

The operation of endotracheal intubation may be described as follows. First, a patient’s head is positioned, and mouth is opened, to allow a straight line of access from the mouth to the vocal cords (e.g., by placing a pillow under the head and neck of the patient). Second, the blade of a laryngoscope (a device which typically consists of a blade, a light source, and a handle) is introduced into the right-hand side of the patient’s mouth, and the blade is used to sweep the tongue to the left. Third, the blade is advanced until the right tonsil is reached, at which point the health care provider sweeps the blade toward the midline of the patient’s body—this brings the patient’s epiglottis into view. Fourth, the health care provider advances the laryngoscope blade until it reaches the base of the epiglottis. Fifth, the health care provider levers the laryngoscope such that the epiglottis is moved toward the top of the patient’s head such that the vocal cords of the patient come into view. Sixth, the health care provider advances the endotracheal tube through the vocal cords, until the inflatable cuff of the endotracheal tube has traversed the patient’s vocal cords. Seventh, the health care provider inflates the inflatable cuff of the endotracheal tube which holds the endotracheal

tube in the patient’s trachea. Eighth, the health care provider secures the endotracheal tube somewhere inside the patient’s mouth (typically, to the patient’s upper jaw), and the operation of endotracheal intubation is considered completed.

BRIEF SUMMARY OF THE INVENTION

The inventor named herein has devised intubation devices and related methods.

In one embodiment, an apparatus is characterized by an intubation-tube placement device; and an intubation tube secured to the intubation-tube placement device.

In another embodiment, an apparatus is characterized by an intubation-tube placement device; and an anti-perforation device coupled to the intubation-tube placement device.

In another embodiment, an apparatus is characterized by an intubation-tube placement device; and at least one tactile-actuator flap coupled to the intubation-tube placement device.

In another embodiment, an apparatus is characterized by an intubation-tube placement device; and a handle affixed to the intubation-tube placement device.

In another embodiment, a method is characterized by inserting an intubation-tube placement device, secured to an intubation tube, into a patient’s oral cavity; forcing the intubation-tube placement device through the patient’s vocal cords; and axially sliding the intubation tube along the intubation-tube placement device such that the intubation tube follows the intubation-tube placement device through the patient’s vocal cords.

The foregoing is a summary and thus contains, by necessity, simplifications, generalizations and omissions of detail; consequently, those skilled in the art will appreciate that the summary is illustrative only and is NOT intended to be in any way limiting. Other aspects, inventive features, and advantages of the devices and/or processes described herein, as defined solely by the claims, will become apparent in the non-limiting detailed description set forth herein.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

FIG. 1A, shows a side-plan view of an intubation-tube placement device **100** secured to an intubation tube **116**.

FIG. 1B shows that another implementation of an intubation-tube placement device **100** secured to an intubation tube **116** is characterized by an intubation-placement-device guide **120** integral with the intubation tube **116**, where the intubation-placement-device guide **120** has a hole through which the intubation-tube placement device **100** has been inserted.

FIG. 2 depicts a side-plan isolation view of an anti-perforation device **102** coupled to an intubation-tube placement device **100**.

FIG. 3A shows a side-plan isolation view of an alternate embodiment of an anti-perforation device **102** coupled to an intubation-tube placement device **100**.

FIG. 3B depicts a side-plan isolation view of an alternate embodiment of an anti-perforation device **102** coupled to an intubation-tube placement device **100**.

FIG. 3C illustrates a side-plan isolation view of an alternate embodiment of an anti-perforation device **102** coupled to an intubation-tube placement device **100**.

FIG. 4A shows a front-plan view of an anti-perforation device **102** coupled to an intubation-tube placement device **100**.