

Articulated Oral Airway

Published date: April 3, 2014

Technology description

Technology Description:

This technology is an advanced oral airway device which supports the airway opening as well as provides increased space at the distal end for working with ventilation devices, fiber optic scopes, etc. The device possesses two novel attributes that increase its functionality: 1) It actively displaces the tongue while stenting open the airway & 2) It has a locking feature which reversibly keeps the device in an open conformation at the inserted distal end, producing an opening of greater volume. The device is constructed in two (longitudinal) halves, yet still possesses the ability to pivot about its hinge, thus allowing for a greater opening of the airway post-insertion. The bilateral construction allows for the ability to break down and remove the device from the airway without manipulating the instruments that were inserted inside the oral airway's lumen.

Background:

An oral airway (oropharyngeal airway, OPA, oropharyngeal stent) is a medical device used to maintain a patent (open) airway. This becomes necessary in non-awake individuals whose jaw muscles relax allowing the tongue or other soft tissue to obstruct the airway. Oral Airways are also commonly employed to preserve the airway space for use with fiber optic intubation or anatomical evaluation. Oropharyngeal airways come in a variety of sizes, from infant to adult, and are used commonly in pre-hospital emergency care and for short term perioperative airway management or when manual methods are inadequate to maintain an open airway. In many instances, additional tongue/soft tissue displacement at the end of the oral airway would be highly advantageous and provide medical professionals with more space for gas exchange and more room for the manipulation of tools, thus improving their ability to treat the patient.

Technology Description:

This technology is an advanced oral airway device which supports the airway opening as well as provides increased space at the distal end for working with ventilation devices, fiber optic scopes, etc. The device possesses two novel attributes that increase its functionality: 1) It actively displaces the tongue while stenting open the airway & 2) It has a locking feature which reversibly keeps the device in an open conformation at the inserted distal end, producing an opening of greater volume. The device is constructed in two (longitudinal) halves, yet still possesses the ability to pivot about its hinge, thus allowing for a greater opening of the airway post-insertion. The bilateral construction allows for the

ability to break down and remove the device from the airway without manipulating the instruments that were inserted inside the oral airway's lumen.

Advantages

·TONGUE DISPLACEMENT– Provides a necessary attribute in that it facilitates ventilation to the unconscious or sedated individual whose airway muscles relax and allow the tongue or other soft tissue to obstruct the airway.

·HINGED CONFORMATION– Provides a reversible locking mechanism in the open conformation by which to increase the volume of the airspace and potential workspace at the distal end of the device. Also acts as a conduit through which a flexible fiber optic scope can pass for the purpose of intubation or anatomical evaluation.

Institution

[University of Iowa](#)

联系我们



叶先生

电话 : 021-65679356

手机 : 13414935137

邮箱 : yeyingsheng@zf-ym.com