An oropharyngeal suction-airway for unconscious and emergency patients

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The author discusses an oropharyngeal suction-airway that can be used to suction out the oropharyngeal area while maintaining a viable airway in the unconscious or emergency patient.

Oropharyngeal airways have been used for many years to maintain a patent airway in the unconscious or emergency patient. An oropharyngeal airway is of particular value for use in patients emerging from anesthesia after the endotracheal tube has been removed and in emergency situations for airway maintenance.

Several types of oral airways are available. These include the Guedel, Heidbrink-Lom bard, Hudson and Berman. The Berman is the most popular airway in use today.

As a patient emerges from anesthesia with an oral airway in place, quite frequently he will realize, perhaps subconsciously, the presence of the oral airway. Such patients may then clench their teeth on the airway. During this time it may become necessary to evacuate the oropharyngeal area of blood, mucous, saliva or vomitus.

With some airways, the Berman in particular, it is difficult to suction out the oropharyngeal area while the patient is clenching the airway. Because it can be very difficult to get the patient’s mouth open in such a situation, it becomes necessary to pass a small suction catheter through the nostrils into the nasopharyngeal, oropharyngeal and paralaryngeal areas to remove fluids that may be present in order to insure a patent airway and prevent aspiration of vomitus, blood, mucous, or saliva into the larynx, bronchi and lungs. Such aspiration may result in acute aspiration pneumonia, or, in more severe cases, acute airway obstruction and death if the obstruction is not removed quickly.

Suctioning via the nasal catheter has the following disadvantages: (1) The person doing the suctioning has no certain way of knowing where

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**Figure 1**
Suction-airway being used in an unconscious patient to suction out oropharynx while the patient breathes through the airway.
the suction tip of the catheter is located; (2) epis-taxis may occur, which in itself can cause an airway problem; and (3) laryngospasm can result.

An alternative oropharyngeal suction-airway has been designed. It provides an easy and safe method of suctioning out the oropharyngeal area while the patient is breathing with the airway in place (see Figure 1).

This suction-airway contains a central passage tube and two lateral airway passages (Figures 2 and 3). When the device is being used as an airway, the patient respires through all three passages. When suctioning is taking place, the central tube, which opens on both the anterior and posterior ends of the airway, is used to evacuate the pharyngeal area (Figure 4). This is accomplished by connecting a standard 3/8" I.D. suction adapter to the suction connector on the suction-airway and applying a vacuum, thereby suctioning out the pharyngeal area (Figure 5).

Figure 2
Oropharyngeal suction-airway showing lateral and central passages, thumb and forefinger rest, and air vent suction control.

Figure 3
The suction-airway contains a central passage tube and two lateral airway passages.

Figure 4
Central tube connector is shown on the anterior end of the airway.

Figure 5
A 3/8" I.D. suction tube with adaptor is shown connected to the airway. The thumb is positioned over an air vent valve control.
The device has thumb and forefinger rests to aid in positioning the suction-airway. An air vent suction control valve controls the intensity of the vacuum (Figure 2).

In cases where oxygen insufflation is needed, an oxygen tube can be connected to the airway and oxygen administered via the central passage.

**Suction-airway use in emergencies**

Because time and motion are important in emergency airway maintenance, this oropharyngeal suction-airway design is of special value in critical situations when suctioning must be performed while an adequate airway is maintained.

The manipulations required to remove an oral airway and insert a tonsillar suction into the oropharyngeal area, then replace the oral airway following suction, are unnecessary when the suction-airway is used. The evacuation of the oropharyngeal area with this airway is accomplished by simply connecting a standard suction tube to the front of the suction-airway, which in effect converts the airway into a suction instrument. Emergency oxygen administration, as mentioned earlier, can be carried out by attaching an oxygen tube to the fitting on the front of the airway.

This airway seems to be of real value in emergency and recovery rooms, intensive and coronary care units, and emergency medical vehicles, where the suction-airway can be used to remove vomitus, blood, or mucus, thereby preventing airway obstructions.

**Summary**

The oropharyngeal suction-airway provides an easy, effective and safe method of evacuating the pharyngeal area in an unconscious patient, with the operator knowing at all times the exact location of the suction tip.

The suction-airway is available in four sizes, and is of particular value during the postanesthetic recovery phase of patient care and in airway maintenance in unconscious emergency patients.

**REFERENCES**


**AUTHOR**

W. H. Wall, DDS, received his DDS from Emory University. He served his oral and maxillofacial internship and received his anesthesia training at University of Miami and Jackson Memorial Hospital. Dr. Wall is credited with the invention of the Wall Universal Fracture Splint, used in jaw fractures, and the Wall Suction-Airway.

Currently, Dr. Wall is engaged in the private practice of oral and maxillofacial surgery in Atlanta, Georgia, and is an assistant clinical professor of oral and maxillofacial surgery at Emory University. The device presented in this article is supplied by Unisplint Corporation, Atlanta, Georgia.