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Airway Adjuncts

أسس التخدير العملي

المرحلة الثانية

محاضرة ٢

Airway adjuncts include various devices used to access and maintain a patent airway like:

1.oropharyngeal airway.

2.nasopharyngeal airway.

3.Supraglotic airway.

4.tracheal intubation.

5.cricothyrotomy procedures.



Oropharyngeal airway or Guedel airway

This anatomically shaped airway is inserted through the mouth into the oropharynx above the tongue to maintain the patency of the upper airway.

Components:



1. The curved body of the oropharyngeal airway

contains The air channel. It is flattened

anteroposteriorly and curved laterally.

2. There is a flange at the oral end to prevent

the oropharyngeal airway from falling back into the mouth.

3. The bite portion is straight and fits between the teeth. It is made of hard plastic to prevent occlusion of the air channel should the patient bite the oropharyngeal airway.

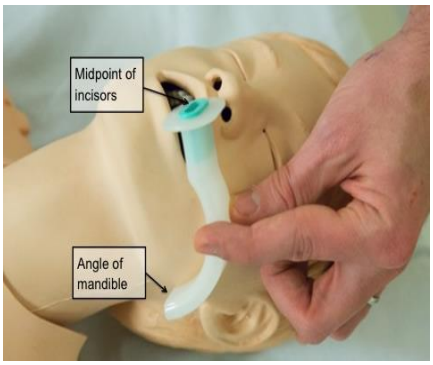
Mechanism of action:

1. Keep patent airway by preventing the tongue and epiglottis from falling backwards.

2. Oropharyngeal airways are designed in different sizes to fit the majority of patients from neonates to adults.

3. The air channel should be as large as possible in order to pass suction catheters.

4.Suitable Guedel airway size is matching the distance from the patient's incisors to the angle of the mandible.



Problems in practice and safety features:

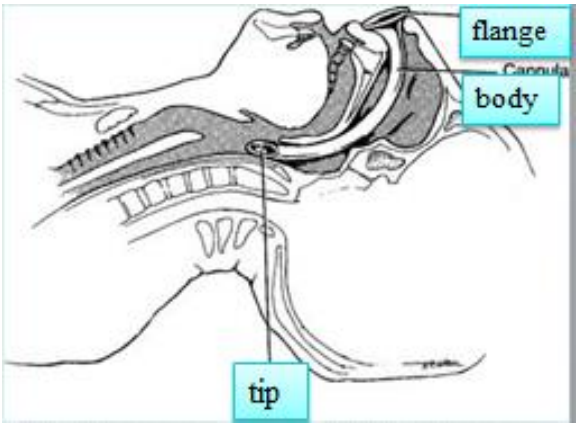
1. Trauma to the different tissues during insertion.

2. Trauma to the teeth , crowns if the patient bites on it.

3. If inserted in a patient whose pharyngeal reflexes are not depressed enough, the gag reflex and vomiting can occur.



Nasopharyngeal airway



Is a hollow plastic or soft rubber tube that can be inserted through the nose into the nasopharynx, bypassing the mouth and the oropharynx. The distal end is just above the epiglottis and below the base of the tongue.

Components:

1. The rounded curved body of the nasopharyngeal airway.
2. The tip bevel is left-facing.
3. The proximal end has a flange.

A "safety pin" is provided to prevent the airway from migrating into the nose.



Mechanism of action:

1. It is an alternative to the oropharyngeal airway when the mouth cannot be opened or an oral airway does not relieve the obstruction.
2. Nasotracheal suction can be performed using a catheter passed through the nasal airway.
3. It is better tolerated by semi awake patient than the oral airway.
4. A lubricant is used to help in its insertion.

Problems in practice and safety features

1. Its use is not recommended when the patient has a bleeding disorder, is on anticoagulants, has nasal deformities or sepsis.
2. Excess force should not be used during insertion as a false passage may be created.

Laryngeal mask airway (LMA Classic)

This very useful device is frequently used as an alternative to either the face mask or tracheal tube during anesthesia.

A variety of sizes are available, ranging from size 1 which is used in the neonate to size 5 which is used in large adults



Components:

1. A transparent tube of wide internal diameter, the proximal end is a standard 15mm connection.

2. An elliptical cuff at the distal end. The cuff resembles a small face mask and is inflated via a pilot balloon * with a self-sealing valve #.

3. Aperture bars There are slits at the junction between the tube and the cuff. These prevent the epiglottis from obstructing the laryngeal mask.

Mechanism of action:

1. The cuff is deflated and lubricated before use. It is inserted through the mouth till the cuff lies over the larynx.

2. It is inflated once the cuff is in position.

3. The laryngeal masks have wide internal diameters in order to reduce the flow resistance to a minimum, This makes them suitable for long procedures using a spontaneous ventilation technique.

4. It also has a role as aid in difficult intubation. Once in position, it can be used to introduce a bougie or a narrow lumen tracheal tube into the trachea.

LMA Chart Size

LMA SIZE	PATIENT SIZE (kg)	MAXIMUM CUFF VOLUME (ml)
Size 1	Neonates up to 5	4
Size 1½	Infants 5–10	7
Size 2	Children 10–20	10
Size 2½	Children 20–30	14
Size 3	Patients 30–50	20
Size 4	Patients 50–70	30
Size 5	Patients 70–100	40
Size 6	Patients over 100	50

