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Face masks

أسس التخدير العملي

المرحلة الثانية

محاضرة ١

Anesthesia face mask

- The face mask is made of silicone rubber or plastic.
- The face mask is designed to fit the face anatomically and comes in different sizes to fit patients of different age groups (from neonates to adults)0,1,2,3,4,5.
- Aim of face mask to produce tight seal connection between breathing system and patient upper airway.

Uses of the anesthesia facemask

1.Pre-oxygenation prior to induction of anesthesia.

2.Inhalational induction of anesthesia.

3.Bag-mask ventilation (BMV) prior to intubation.

4.Maintenance of anesthesia.

5.BMV during resuscitation.

Components

1.The **body** of the mask which rests on an air-filled cuff or flap .

2. The proximal end of the mask has a 22-mm inlet **connecter** attach to the angle piece.

3. Some designs have **clamps** for a harness to be attached.

4. **Seal or edge** may be anatomically shaped and fitted with a cuff or flap.

5. **inflation valve**

- The angle piece has a 90-degree bend with a 22-mm end to fit into a catheter mount or a breathing system.

Technique for face mask ventilation

One-Hand Technique

In one-hand technique, the thumb and index finger of the left hand are placed on the mask body to press mask downward. The remaining three fingers are placed on the mandible with little finger below the angle of the mandible. This is known as SINGLE HAND CE technique"

Two-Hands Technique

Two-hands method is used for difficult airway . IN DOUBLE HAND CE The thumbs and index fingers are placed on either side of the mask body. Remaining fingers of both the hands are placed on either side under the mandible. The mandible is lifted and the head extended.

While in DOUBLE HAND VE thumbs and thenar eminence placed over each side of mask and the rest four fingers pull jaw upward.

I case of two-hand technique, second person is needed to ventilate the patient while the airway is maintained by first person.

Types of face mask

1. Anatomical face masks

The anatomical face masks has a cushion that's anatomically correct patient face.

Has inflatable cuff seal or malleable rubber body.

2. Nasal masks or inhailer

These masks are used during dental chair anesthesia

An example is the Goldman nasal inhaler which has an inflatable cuff to fit the face and an adjustable pressure limiting (APL) valve.

3. Endoscopic Masks

specifically designed to allow mask ventilation during endoscopic procedures elastic diaphragm opening designed for the passage of a fiberoptic bronchoscope. This technique allows to ventilate the patient during procedure.

4. Rendell-Baker-Soucek Mask

It has a triangular body,

this mask has low dead space.

useful in pediatric patients.

can be used in patient with a tracheostomy

6. Masks for Noninvasive Positive Pressure Ventilation or Continuous Positive Airway Pressure CPAP

Use for prolong duration

Has strap

Use in specific disease

Risk factor for difficult mask ventilation

1. Presence of facial hair
2. Facial trauma , tumor , edema
3. Lack of teeth (edentulous)
4. Patients with sunken cheeks
5. Obesity (BMI >25)
6. History of obstructive sleep apnoea
7. Age >55yrs
8. History and signs of snoring or upper airway obstruction

Complication

1. Skin Allergy
2. Nerve Injury
3. Gastric Inflation
4. Eye Injury and Skin Necrosis
5. Cervical Spine Movement
6. Environmental Pollution
7. User Fatigue
8. Jaw Pain

How to choose face mask?

- An appropriate size face mask is important for a tight seal on the patient's face allowing good mask ventilation.
- Smallest mask fit for patient to decrease dead space and minimize eye injury.
- Transparent >> why? To see if there is excessive secretion or vomitus.
- special masks choose for special procedure .