

General Anesthesia

1st lecture/ 3rd stage/
anesthesia technology
2023 - 2024

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General anesthesia :

Components of general anesthesia :

1. Sedation and reduced anxiety
2. Lack of awareness and amnesia
3. Skeletal muscle relaxation
4. Suppression of undesirable reflexes
5. Analgesia

STEPS of ANESTHESIA :

1- Induction (Intravenous - Inhalation)

2- Maintenance (Intravenous - Inhalation)

3- Recovery

STAGES of ANESTHESIA :

- **Stage I : Analgesia:** Loss of pain. (loss of eyelid reflex)
- **Stage II : Excitement:** The patient displays delirium and possibly combative behavior. Potentially dangerous responses can occur during this stage including vomiting, laryngospasm, HTN, tachycardia, and uncontrolled movement

STAGES of ANESTHESIA :

- **Stage III: Surgical anesthesia :**

There is gradual loss of muscle tone and reflexes as the CNS is further depressed. Regular respiration and relaxation of skeletal muscles with eventual loss of spontaneous movement occur. This is the ideal stage for surgery.

- **Stage IV: Medullary paralysis (Overdose)**

- Severe depression of the **respiratory** and **vasomotor** centers occurs, Onset of apnea, dilated and nonreactive pupils, and hypotension to complete circulatory failure. Ventilation and/or circulation must be supported to prevent death

INDUCTION METHODS :

Intravenous

Advantage

- 1- Rapid onset
- 2- Patient comfort
- 3- Depression of pharyngeal reflexes allows early insertion of LMA
- 4- Airway protection in rapid-sequence induction

Inhalational

Advantages

- 1- Does not require IV access (Useful for patient with needle-phobia)
- 2- useful in pediatrics
- 3- Respiration is maintained
- 4- Upper esophageal sphincter tone maintained

INDUCTION METHODS :

Intravenous

Disadvantage

- 1- Venous access required
- 2- Risk of hypotension
- 3- Apnea common
- 4- Loss of airway control
- 5- Anaphylaxis

Inhalational



Disadvantage

- 1- Slow process
- 2- Potential excitement phase
- 3- Irritant and unpleasant, may induce coughing
- 4- Pollution
- 5- May cause a rise in ICP/IOP

Thank You

End of lecture