



REVIEW ARTICLE ON ANESTHESIA AND ITS TYPES

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Abstract :

Anesthesia is a loss of sensation in a body part caused by the administration of medication.

All types of anesthesia are administered to keep your comfortable and pain free during surgery, medical procedures, tests. There are three types of anesthesia.

- 1) local anesthesia
- 2) General anesthesia
- 3) Regional anesthesia (1)

Key Words :

- 1) Anesthesia
- 2) Loss of sensation
- 3) pain
- 4) Side effects

Introduction :

The word anesthesia is derived from the Greek Word “anaesthetos” which means “without sensation”. The anesthesia pronounced “an-es-THEE-zhuh”

Anesthesia is a loss of sensation in a body part caused by the administration of medication. The medications used to block pain are called anaesthetics.

Side effects of anesthesia :

- Dementia
- Hypothermia
- Nausea or vomiting (1)

Types Of Anesthesia :

- 1) Local Anesthesia
- 2) General Anesthesia
- 3) Regional Anesthesia (1)

Local Anesthesia :

Local anesthesia are those drugs which blocks the neuronal conduction at any particular area in body. It is loss of sensation and pain at any particular area in body or local area.

There are many methods used to induce local anesthesia

- 1) Mechanical trauma
- 2) Low temperature
- 3) Anoxia
- 4) Chemical irritants
- 5) Neurolytic agent such as alcohol and phenol
- 6) Chemical agent such as local anesthetics. (2)

Chemical structure of local anesthesia :

Local anesthesia are divided into two groups according to their chemical structure of the amino esters (cocaine, procaine, chlorprocaine, and tetracaine) and the amino amides (lidocaine , bupivacaine , mepivacaine ropivacaine ,and prilocaine).

The local anesthesia of typical molecule consist three components :

- a) an aromatic lipophilic ring , usually benzene
- b) an amphipathic intermediate chain of about 6 to 9A, and
- c) a terminal tertiary amine , hydrophilic , which is a base proton acceptor (H+). (3)

Brand Names And Generic Names Of Drugs For Treatment Of Local Anesthesia :

1) Benzocaine -

Benzocaine is a local anaesthetic . It is used in treatment of painful conditions such as mouth ulcers, sore throat.

Trade Names :

Benzonac Gel
Nit-N-Mite (25g)
Nit N Mite (Skin) (25g)

2) Bupivacaine -

Bupivacaine is a local anaesthetic . It is used for surgery and obstetrical procedures.

Trade Names :

Bupivan (0.25%)
Marcaine (0.5%)
Anawin (0.25%)

3) Lidocaine -

Lidocaine is a local anaesthetic .these are indicated for local or regional anesthesia .

Trade Names :

Asthesia (30g)
Candid -O (5)

General Anesthesia :

The drugs which produce reversible loss of all sensation and consciousness.

The cardinal features of general anaesthetic -

- Loss of all sensation, especially pain
- Sleep and amnesia
- Abolition of somatic and autonomic reflexes
- Immobility and muscle relaxation .(6)

General anesthesia is a safe and standard medical procedure.the beneficial effects on general anesthesia is they suppress the patient's conscious awareness, is far from understood.(4)

general anesthesia includes the following components :

analgesia (absence of pain), amnesia (absence of memory). General anesthesia are divided into two types

- Inhalation Anesthetics :

Halothane , Enflurane , Isoflurane, Nitrous Oxide

- Noninhalation Anesthetics :

Ketamine , Etomidate , Thiopental (7)

Brand Names And Generic Names Of Drugs For Treatment Of General Anesthesia : 1)Halothane -

Halothane is an inhalation general Anesthetics, they prescribed for the induction and maintenance of general anesthesia.

Trade Names :

Fluothane
Fluothane (200 ml)

Isoflurane -

Isoflurane is halogenated ether, it is used for maintenance of general anesthesia.

Trade Names :

Isorane (250 ml)
Forane (100%) (8)

Regional Anesthesia :

Regional Anesthesia is numbs a large part of the body such as from the waist down . Regional anesthesia is often used during childbirth and surgeries of the arm , leg or abdomen . Types of regional anesthesia include spinal anesthesia (also called subarachnoid block), epidural anesthesia, and nerve blocks. (9,10,11)

Spinal Anesthesia :

Drugs used -

Lidocaine 5%
Mepivacaine 2%
Tetracaine 0.5% (12)

Epidural Anesthesia :

Drug used -

Epidural medications fall into a class of drugs called local anesthetics , such as bupivacaine, chloroprocaine , or lidocaine

Nerve block :**Drug used -**

Bupivacaine

(pf) 0.5% In 0.9 sodium chloride injection

Bupivacaine

132 mg / MI intrasubacromial injection solution

Chirocaine

(pf solution). (13)

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