SHORT COMMUNICATION

ISSN (O): 2349-5332
CODEN: IRJPHY

ANESTHESIA AND ITS APPPLICATION

Siwani Devi[*1], Mohammad Mukim[1], Pratishtha Sharma[1], Merin Rosy Joshef[1], Jagdish Chandra Nagar[1], Nesar Ahmad[2]

[1] Kota College of Pharmacy, Kota, Rajasthan, India-324005

[2] Rahul Sankriyayan College of Pharmacy, Azamgarh, Uttar Pradesh, India-276001

Submitted on: 30.11.19;	Revised on: 15.12.19;	Accepted on: 20.12.19

ABSTRACT

Anesthesia simply means, without sensation is a state of controlled, temporary loss of sensation or awareness that induced for medical purposes include analgesia, paralysis, amnesia or unconsciousness. A patient under the effects of anesthetic drugs is referred to as being anesthetized.The broad categories of anesthesia are: General anesthesia and Local anesthesia. General anesthesia suppress CNS activity and results in unconsciousness and total lack of sensation Examples are halothane and ketamine etc whereas, Local anesthesia which blocks the transmission of nerve impulses from a specific part of the body Examples are procaine and lignocaine (Lidocaine) etc. Anesthesia has various applications in field of medical like hypnosis, muscle relaxation and during many surgeries. But with uses it also have many complications during as well as after anesthesia like Respiratory depression, excess, salivation, convulsions, nausea, Vomiting, Pneumonia and Persisting sedation.

KEY WORDS: Amnesia, Hypnosis, Convulsion, Salivation

Corresponding author: Siwani Devi,
E-mail: mukim.life@gmail.com

Indian Research Journal of Pharmacy and Science; 23(2019)2032-2034;
Journal Home Page: https://www.irjps.in
DOI: 10.21276/irjps.2019.6.4.5

ANESTHESIA

Anesthesia is as a state of controlled , temporary loss of sensation or awareness that for induced for medical purpose. It may include analgesia (relief or prevention of pain), paralysis (muscle relaxation), amnesia (loss of memory), or unconsciousness. A patient under the effects of anesthetic drugs is referred to as being anesthetized.[1]

The main two categories of anesthesia are:

- ❖ General anesthesia
- ❖ Local anesthesia

- **General anesthesia** are are the agents which produces reversible loss of sensation and consciousness .The cardinal features of general anesthesia are:
  - ∗ Loss of all sensation, especially pain.
  - ∗ Sleep (unconsciousness) and amnesia.
  - ∗ Immobility and muscle relaxation.
  - ∗ Abolition of refexes.[2]

- **Local anesthesia** are the agents which upon topical applications or local injection causes reversible loss of sensory perception , specially of pain , in a restricted area of the body.The blocks generation and conduction of reverse impulses at all parts of the neurons where they come in contact , without causing any structural damage.[3]

PHARMACOLOGICAL APPLICATIONS OF ANESTHESIA

Some clinical applications of Anesthesia drugs are;

1. Ketamine by virtue of its broncho dilating property and profound analgesia allowing use of high oxygen concentration is considered to be the IV induction agent of choice in patients with high bronchospasm.

2. Ketamine is considered to be bronchodilator of choice in rescue therapy for refractory bronchospasm in OT and refractory status asthmaticus in the intensive care unit (ICU).

3. For induction of patients especially children with congenital heart diseases with right to left shunt; ketamine is a choice of drug due to its beneficial cardiovascular effects of increasing systemic vascular resistance.

4. It has been widely used to provide analgesia in burn dressing changes, during excision and grafting and for sedation.[4]

5. Nicardipine Anesthetic may ease some symptoms of inflammatory bowel diseases (IBD) .

6. Nicardipine used as vasodilator with limited effects on the inotropic and dromotropic function of the myocardium.[5]

7. They are used to control blood pressure intra operatively in response to tracheal intubation and in the postoperative period .

8. They are used as neuro-protective , anti-inflammatory and anti-tumour effects.

9. Anesthesia is used for treatment of children with Obstructive sleep apnoea (OSA).[6]

10. Intranasal midazolam used for radiological procedures.[7]

11. Lidocain 2 % with or without adrenaline is the most popular Dental anesthesia.

12. Proparacaine is the surface anesthetic used as an ophthalmic anesthetic.

13. Nitrous oxide 20% produces analgesia equivalent to that produced by conventional doses of morphine

14. Continuous epidural ropivacaine has become popular for relief of postoperative and Labour pain.

15. Halothane is a potent anesthetic ; therefore precise control of administrated concentration is

essential . For induction 2-4% and for maintenance 0.5-1% is delivered by the use of a special vapourizer and used as competitive neuromuscular blockers.[8]

REFERENCES:

1. James Shorthouse., Anesthesia, Oxford English Dictionary, University Press.,2005; 94(1): 138-139.
2. Tripathi KD. Essentials of Medical Pharmacology, Published by Japyee Brothers Medical Publishers (P) LTD. 2004 p 333.
3. Tripathi KD. Essentials of Medical Pharmacology, Published by Japyee Brothers Medical Publishers (P) LTD. 2004 p 320.
4. Madhuri Kurdi., Current application in anesthesia, pain and critical care anesthesia assay., Anesth Essays Res., 2014; 8(3): 283–290.
5. Joseph D Tobias., Nicardipine: Application in anesthesia practice., Journal of clinical anesthesia., 1995; 7(6): 525-533.
6. Dr Isabeau Walker., Anesthesia Tutorial of the week ., 2009; 159: 1-6.
7. Anisha A. Chokshi, Vipul R. Patel, Evaluation of intranasal Midazolam spray as a Sedative in pediatric patients for Radiological imaging procedures., Anesth Essays Res., 2013; 7(2): 189–193.
8. Tripathi KD. Essentials of Medical Pharmacology, Published by Japyee Brothers Medical Publishers (P) LTD. 2004 p.392, 393, 405,406.

CONFLICT OF INTEREST REPORTED: NIL ; SOURCE OF FUNDING: NONE REPORTED