Al Mustaqbal University

College of Health and Medical Techniques

Department of Anesthesia

Practical Anesthesia

Stage Two

Lecture 7

Anaesthetic Drugs

By Lectures

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Anaesthetic Drugs

Anesthesia

Anesthesia: Lack of sensation

Analgesia: Loss of response to pain

Sedation: A state of relaxation or brief reduction in consciousness

Types of anesthesia

- General Anesthesia (GA)
- IV anesthesia
- Regional Anesthesia (spinal , epidural anesthesia)
- Nerve Blocks
- Local Anesthesia

IV Anesthetics

→ Thiopental

- Thiopentone is a barbiturate that was used widely as an IV anaesthetic agent.
- Very potent anticonvulsant , reduction of intracranial pressure ICP.
- Repeated doses or infusions have a cumulative effect.
- Induction dose: 3-6 mg/kg (25mg/ml)
- onset of action: 20-30 seconds

Adverse effect

- Hypotention
- Tissue necrosis from extravasation
- Apnoea & respiratory depression
- laryngospasm and bronchspasm (not used with asthmatic patient)

→ propofol

- Propofol is an IV anaesthetic induction agent that is widely used as a sedative drug
- Rapid recovery
- Decreases CBF & ICP
- Infusion used to maintain anesthesia
- Induction dose(adult): 1.5-2.5 mg/kg (10mg/ml)
- Maintenance infusion: 100–200 µg/kg/min
- Sedation: 25–75 µg/kg/min
- onset of action: 30-45 seconds

Adverse effect

- Hypotention (more than thiopental) , worse if hypovolaemic
- Apnoea
- Pain on injection
- Allergic reaction

→ ketamine

- Characterised by profound analgesia , immobility, amnesia, feeling of dissociated
- Bronchial muscle is dilated (used with asthmatic patient)
- Prolonged recovery
- Induction dose: 2 mg/kg (50mg/ml)
- Analgesia dose: 0.1–0.5 mg/kg IV
- onset of action: 30-60 seconds

Adverse effect

- Hypertention & tachycardia
- Increased intracranial pressure
- Delirium , hallucination & nightmares

Muscle relaxants

→ Succinylcholine

- The only depolarizing muscle relaxant
- it is rapidly metabolized by pseudocholinesterase
- Used for rapid sequence induction (endotracheal intubation in a patient with a full stomach)
- Induction dose: 1- 1.5 mg/kg (20mg/ml)
- onset of action: 30 – 60 seconds

Adverse effect

- cardiac dysrhythmia
- Increased intracranial pressure ICP
- Increased intraocular pressure IOP
- Malignant hyperthermia triggers

→ Atracurium

- Elimination by hofmann degradation
- Induction dose: 0.5 mg/kg (10mg/ml)
- onset of action: 2 min

Adverse effect

- Hypotension
- Bronchospasm (due to histamine release)
- Allergic Reactions

→ Cisatracuriun

- Elimination by hofmann degradation
- Does not release histamine
- Does not alter heart rate or blood pressure
- Induction dose: 0.1-0.2 mg/kg (2mg/ml)
- onset of action: 3-5 min

→ rocuronium (esmeron)

- eliminated primarily by the liver and slightly by the kidneys.
- Less potent than most other muscle relaxants
- Induction dose: 0.6 mg/kg (10mg/ml)
- onset of action: 60-90 seconds

Adverse effect

- Little histamine release


Thank You