

Clinical Symptoms and management
of acute poisoning with
Barbiturates and Benzodiazepine

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BARBITURATES

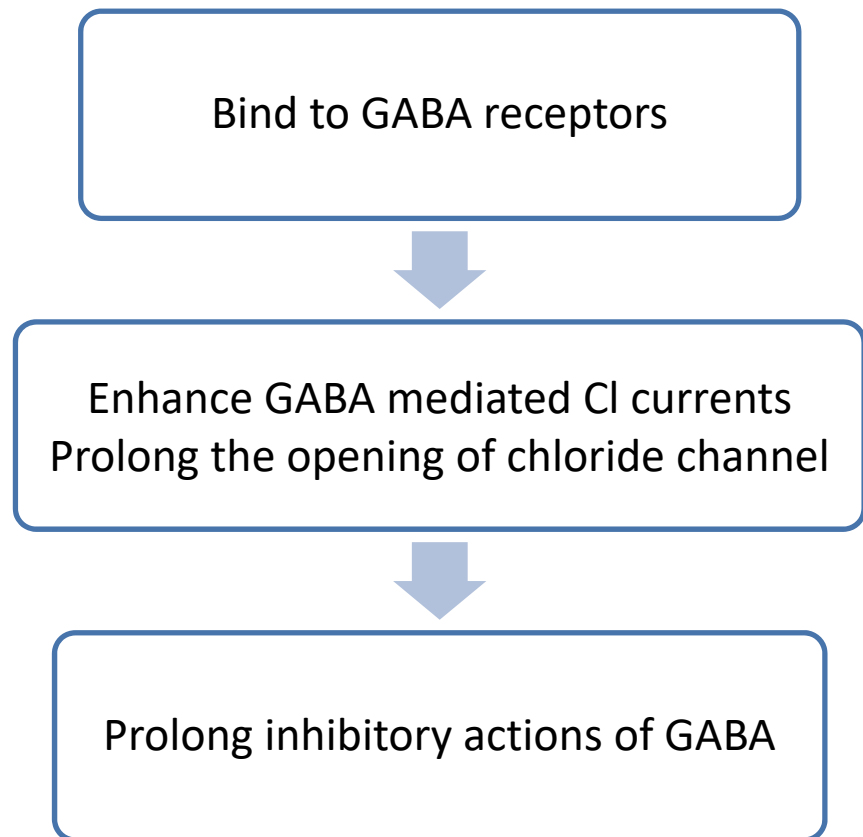
Uses

- Long acting: Phenobarbitone
- Short acting: Butobarbitone, Pentobarbitone
- Ultra-short acting:
 - Thiopentane, Methohexitone

THERAPEUTIC USES:

- INSOMNIA
- EPILEPSY
- ANAESTHESIA
- Adjuvants in psychosomatic disorders
- Pre-operative sedation

Mechanism



BARBITURATES (Cont...

ADVERSE EFFECTS:

- Residual depression.
- Paradoxical excitement.
- Hypersensitivity reactions-
localised swelling of eye
lid,cheek or lip , erythematous
or exfoliative dermatitis.
- Synergistic action with ethanol
& antihistamines.

TOXIC EFFECTS:

- Slurred speech , ataxia,
lethargy, confusion , headache
, nystagmus .
- CNS depression,coma,shock.
- Pupils –first constricted , later
dilate because of hypoxia.
- Hypothermia
- Cutaneous bullae (blisters)
- **Death due to respiratory
arrest or cardio vascular
collapse.**

BARBITURATES (Cont...

Acute barbiturate poisoning

SYMPTOMS:

- Stupor or coma, areflexia.
 - Peripheral circulatory collapse.
 - Weak & rapid pulse.
 - Cold clammy skin.
 - Slow or rapid & shallow breathing.
 - Pupils constricted & reacting to light initially but subsequently develops paralytic dilatation.
 - Atelectasis (Collapse of an expanded lung).
 - Pulmonary edema.
 - Bronchopneumonia
 - Acute renal shut down.
- Leading cause of poisoning due to their ready availability.
 - Most of the cases are suicidal but some are due to error or ungraded exploration in children.
 - Short acting barbiturates are more dangerous than long acting.**
 - Shock & anorexia occur quickly.**
 - Coma is more severe with short acting barbiturates.**

BARBITURATES (Cont...

MANAGEMENT:

SCANDINAVIAN METHOD:

Hospitalisation

Support vital functions

- Consciousness.
- Airway , breathing , circulation.

Prevent further absorption

- Emesis.
- Gastric lavage.
- Activated charcoal & catharsis.

Increase elimination of drug

- Forced diuresis.
- Alkalinization of urine.
- Prophylactic antibiotic.
- Peritoneal dialysis.
- Hemodialysis.
- Hemoperfusion.

Conservative management with good nursing care

Appropriate detoxification or psychiatric after care

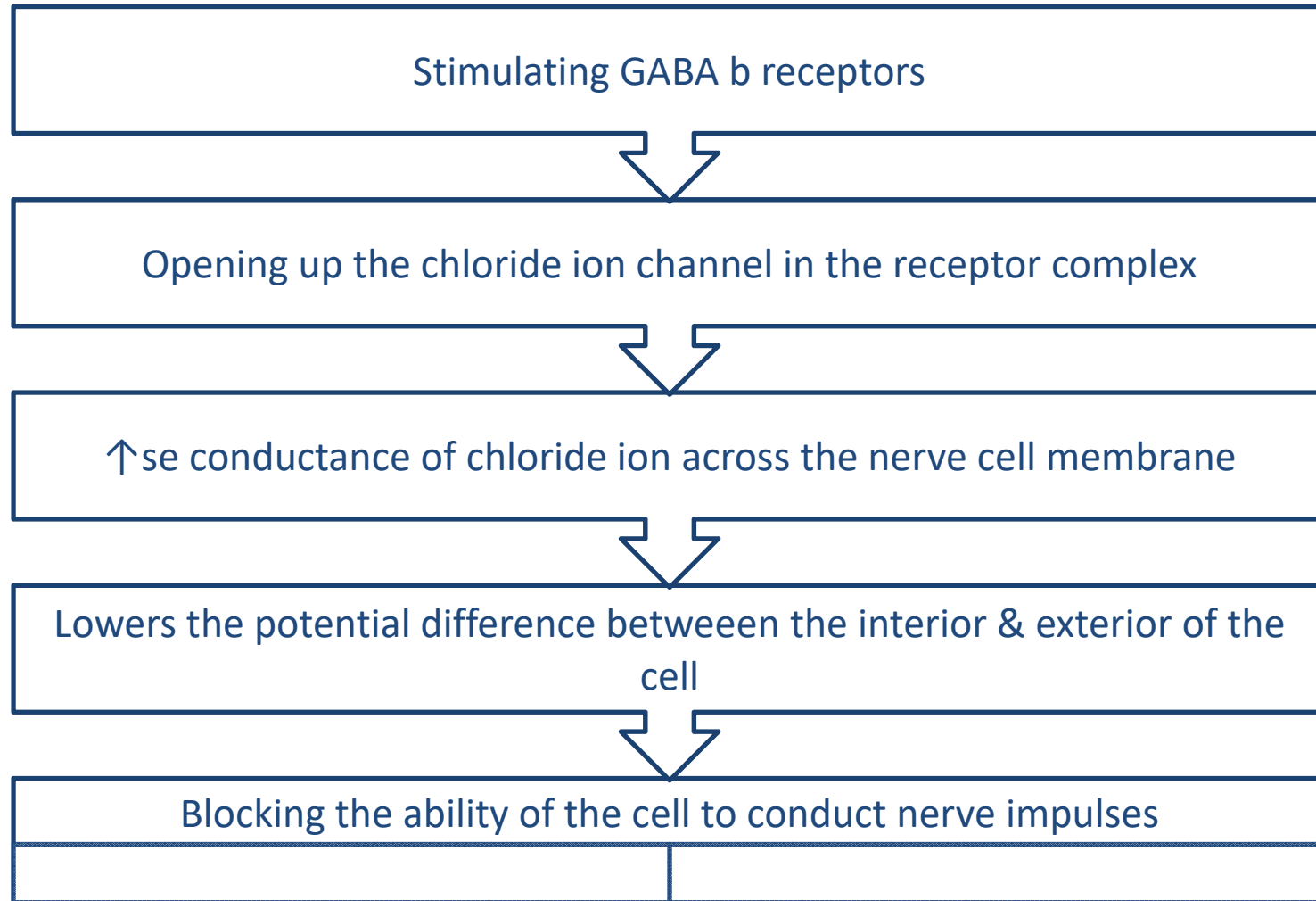
BENZODIAZEPINES

Hypnotic	Antianxiety	Anticonvulsant
Diazepam, Flurazepam, Nitrazepam, Alprazolam, Temazolam, Triazolam	Diazepam, Chlordiazepoxide, Oxasepam, Lorazepam, Alprazolam	Diazepam, Lorazepam, Clonazepam, Clobazam

Also useful:

- Movement disorders (adjunctive therapy)
- Mania (adjunctive therapy)

MODE OF ACTION:



BENZODIAZEPINES (Cont...

Side effects

- Weakness
- Headache
- Amnesia
- Vertigo
- Diplopia
- Nausea
- Diarrhoea
- Chest pain
- Paradoxical effects-
restlessness ,agitation,
hallucinations.

Toxic effects

- Sedation, Coma
- Large doses-neuromuscular blockade
- Hypotension
- Respiratory depression
- Death

Acute poisoning

- MILD:
 - Drowsiness , Ataxia , Weakness
- MODERATE TO SEVERE :
 - Vertigo , slurred speech, nystagmus, partial ptosis, lethargy , hypotension, respiratory depression, coma (stage 1 & 2).

BENZODIAZEPINES (Cont...

Management

Hospitalization

Supportive care

Decontamination

CORRECTION OF HYPOTENSION WITH DOPAMINE OR LEVARTERENOL

ANTIDOTE TREATMENT: FLUMAZENIL

Dose- 0.2 mg/min injected I/V till the patient regains consciousness



