

Gamma-hydroxybutyrate (GHB)

Overview

Recreational drug that can cause rapid respiratory & CNS depression, bradycardia and myoclonic jerks. Effects are short lived (4-6hrs) and can have sudden offset.

Toxic mechanism

Breakdown product of GABA & possible neurotransmitter. May be agonist at several receptors and may affect dopamine, ACh & 5HT, endogenous opioids effects.

Toxicokinetics

Rapid oral abs reduced by food. Rapidly oxidised to CO₂ & H₂O with zero order kinetics. Elimination complete within 4-6 hrs.

Clinical features

Brief euphoria followed by coma in OD. Often can be roused, only to lapse into coma again when not stimulated. Sudden recovery of consciousness often within 2-3 hrs often with some agitation/delerium.

Typical features:

- *General:* Vomiting, bradycardia, sweating
- *CNS:* miosis, agitation, delirium, rarely myoclonic jerks
- *Respiratory:* depression, airway obstruction, Cheyne-Stokes breathing

GHB withdrawal syndrome may occur after stopping daily use.

Investigations

Screening: BSL, ECG, paracetamol

Specific: Blood & urine levels of GHB rarely useful.

Risk assessment

Risk of life-threatening CNS/respiratory depression, increased by EtOH consumption.

Management

Resus: ABCs. O₂. If coma, respiratory depression or loss of airway reflexes → intubate.

Supportive measures: monitor for CNS/respiratory depression. If bradycardia accompanied by hypoBP or poor perfusion can use **atropine**.

Disposition

If no symptoms in 2hs after ingestion may be d/c, otherwise admit until ambulant & eating/drinking.