# Tramadol and Tapentadol

**Clinical toxicity is characterised by adrenergic stimulation and delayed-onset seizures. Opioid toxidrome may also occur (Tapentadol > Tramadol).**

## Toxicity / Risk Assessment

| | Opioid effects | Adrenergic effects | Serotonergic effects |
|---|---|---|---|
| **Tramadol** | ++ | +++ | ++ |
| **Tapentadol** | +++ | ++ | + |

- *Toxic dose is poorly defined. Patients who are more susceptible to toxicity: children, patients with a low seizure threshold (e.g., history of seizure disorder) or severe liver impairment*
- *Ingestion > 2g = significant risk of seizures*

**Clinical features: (delayed > 6 hours with SR preparations)**

- **Seizures**: often delayed, may be >6 hours post-ingestion and up to 24 hours if slow-release preparation
- **Adrenergic effects** - Agitation and autonomic hyperactivity
- **Opioid effects**: CNS and respiratory depression. More common in tapentadol. Less prominent with tramadol unless exposure to high doses.
- **Serotonin toxicity:** is only expected with co-ingestion of other serotonergic agents or MAOI
- Nausea & vomiting are common
- Hypoglycaemia occurs rarely with tramadol

## Management - Attention to ABC and termination of seizures are main priorities

**Decontamination**: Offer 50g activated charcoal in alert cooperative patients: -

< 2 hours post ingestion of > 2 g immediate-release preparation

< 4 hours post ingestion of > 2 g slow-release preparation

**Seizures**

**Benzodiazepines**: Diazepam 5 mg IV every 5 minutes as necessary

**Naloxone:** Seizures are NOT responsive to naloxone

**Agitation & Autonomic hyperactivity**

**Benzodiazepines*:*** Diazepam 2.5-5 mg IV 10 minutely or 5-10 mg PO 30 minutely until sedated

**CNS and Respiratory Depression**

**Naloxone:** place 400 mcg naloxone in 10 mL syringe and make up to 10 mL with N/saline (40 mcg per mL)

- Titrate IV every 60 seconds to response – 1 mL, 2 mL, 3 mL, 4 mL (40 mcg, 80 mcg, 120 mcg, 160 mcg)
- Further increments of 200 mcg may be required up to a total dose of 2000 mcg (then consider other DDx)
- Paediatric naloxone dose - bolus 10 mcg/kg up to 400 mcg, repeat as required

**Disposition**

- Observe for at least 12 hours if immediate release preparation
- Observe for at least 24 hours if slow-release preparation
- Do not discharge at night. Observe all patients until asymptomatic



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