

Rodenticides with shared 'brand' names may contain different agents. Toxicity is associated with prolonged anticoagulation that may last weeks-months.

Toxicity

Single accidental ingestion is usually benign

Ingestion >15 mg/kg can be fatal

Ingestion >0.1 mg/kg will cause anticoagulation

(0.005% = 5mg brodifacoum in 100g of bait)

Accidental exposures in children almost never produces any adverse effect and does not routinely require investigation. Note – if child does develop toxicity following exposure, consider NAI

Ingestion < 1 mg is usually benign

Clinical features:

- Initially usually asymptomatic
- Clinical toxicity normally manifests as bleeding and/or elevated INR (onset can be delayed up to 24-48 hours post ingestion and INR can be prolonged for weeks to months).

Superwarfarins: *brodifacoum, bromadiolone, coumatetradyl, difenacoum, diphacinone, flocoumafen, pindone*

Some rodenticides contain warfarin

Management

Decontamination: 50 g Activated Charcoal (AC) orally within two hours of deliberate poisoning

Life-threatening haemorrhage / active uncontrolled haemorrhage / haemodynamic instability

- Resuscitate, Vitamin K₁ 10mg IV, 4-factor prothrombin complex concentrate *Beriplex*® 50 IU/kg IV

***NOTE- use Vitamin K₁ (phytomenadione). Do NOT use Vitamin K₃ (menadione)**

Management of patients without active bleeding

- Patients with ingestion > 0.1 mg/kg: - measure INR at 6 hours post exposure and then 12-24 hourly until at least 48 hours post ingestion. Do NOT administer prophylactic Vitamin K₁ (as it may mask toxicity)
- Vitamin K₁ is only indicated if INR >1.4

If INR > 1.4:

- Administer 10 mg Vitamin K₁ orally (administer IV if patient has received GI decontamination with AC)
- Measure INR 6-hourly and titrate Vitamin K₁ orally (start with 10-20 mg) according to INR, until a stable Vitamin K₁ dose is established. Large doses of Vitamin K₁ may be required.
- Stabilization may require > 48 hours and up to 100 - 300 mg Vitamin K₁ per day
- Once INR stabilized, total daily Vitamin K₁ dose is usually given BD or TDS and maybe required for months
- Discuss with clinical toxicologist if the patient is regularly prescribed warfarin

Disposition:

- Minor (< 1 mg) accidental ingestion does not require admission or investigations
- If patient is asymptomatic + INR < 1.4 at 48 hours post ingestion, then no further medical treatment required
- Admit patients with initially deranged INR (will require Vit K₁ dose titration via 6 hourly INRs)