

Superwarfarins

Overview

Long-acting anticoagulant rodenticides (e.g. brodifacoum) are benign in single paediatric unintentional OD. Repeated or massive deliberate OD → prolonged (weeks-months) effects.

Toxic mechanism

These inhibit Vit K metabolism reducing the active form needed for synthesis of coagulation factors II, VII, IX & X (& Proteins C & S).

Toxicokinetics

Well abs. Lipophilic & large Vd. Concentrated in liver where met by CP450 + enterohepatic circulation with $T_{\frac{1}{2}}$ =weeks to months.

Clinical features

Usually asymptomatic, severe OD or delayed presentation may have bruising, or bleeding from gums, nose, in urine etc. Peak effects 72-96h.

Investigations

Screening: ECG, paracetamol, BSL

Specific bloods: serial INR (if normal @48h excludes toxicity), superwarfarin level occ useful.

Risk assessment

Single accidental ingestion doesn't cause significant anticoagulation.

Massive OD >0.1mg/kg of brodifacoum (>2g/kg of 0.005% bait in adult)

Management

Resus: ABCs if signs of active bleeding. Active uncontrollable bleeding should receive: **FFP** (10ml-15ml/kg), **prothrombinex HT** (25-50IU/kg) & **vitamin K** 5-10mg all IV.

Supportive Care

Decontamination: Charcoal if <12hr post-OD if deliberate.

Antidote: **Vitamin K** (see Antidotes) only if raised INR as otherwise may mask subsequent toxicity.

Disposition

If bleeding or ↑INR give antidotes and admit. If no bleeding and massive/repeated admit & monitor INR for at least 48hrs. If normal at 48hr without vit K → no toxicity.

Otherwise can d/c without f/u.