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 T½=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.