Dimercaptopropane sulfonate (DMPS)

DMPS is a water-soluble parenteral heavy metal chelator used for the treatment of lead, arsenic, and mercury poisoning.

Parenteral chelation is rarely required and is usually indicated only if an oral chelator is not feasible or available

Indications:

Clinical features consistent with lead, arsenic or mercury poisoning AND an elevated biological fluid concentration consistent with toxicity

(see separate guidelines)

In acute exposures with severe clinical toxicity, chelation should be commenced early prior to biological fluid concentration results

(discuss with a clinical toxicologist)

NB: Dimercaprol and $CaNa_2EDTA$ are alternative parenteral agents but are not commonly available

Contraindications:

-Known hypersensitivity

Presentation

250 mg/5 mL vial

Dose and administration (discuss with a clinical toxicologist)

- 5 mg/kg IV 4 -6 hourly up to 5 days
- Inject undiluted via a syringe driver over 20 minutes
- Do not mix with other drugs or blood products
- DMPS and its metal complexes are renally excreted. Patients with eGFR < 45: 2.5 mg/kg IV 4-6 hourly up to 5 days

Therapeutic endpoint:

- As clinical condition improves, IV chelation therapy may be changed to oral therapy with DMSA
- Discontinue chelation when patient is asymptomatic AND biological fluid concentrations are below the concentration indicating the need for chelation

Adverse effects:

- Rapid administration can cause hypotension and tachycardia
- Hypersensitivity reactions including Stevens-Johnson syndrome have been reported
- Rarely (5%) – nausea, leukopenia, rash, elevated liver transaminases

Pregnancy:

- Not known to be teratogenic in animal studies, however human pregnancy data is unavailable
- Administration is only recommended in circumstances where potential benefit justifies the potential risk to the foetus (discuss with a clinical toxicologist)