

Paraquat is a restricted herbicide. A mouthful is potentially lethal. Immediate decontamination, early HD and avoidance of oxygen are the mainstays of treatment

Toxicity / Risk Assessment

Deliberate self-poisoning is invariably fatal

Accidental ingestions of greater than a mouthful are also

invariably fatal (splash or taste: toxicity unlikely)

- < 20 mg/kg = mild/moderate GI effects

- 20-50 mg/kg = significant GI corrosive injury, multi-organ failure followed by pulmonary fibrosis

- > 50 mg/kg = fulminant multi-organ failure AND death
(>15 mL of 25% solution in 70 kg individual = lethal)

Dermal/inhalational/ocular exposures only cause local tox

Clinical Features:

- Vomiting, corrosive injury (mouth, tongue, GI) occurs early

- Cardiovascular collapse, progressive acidosis, renal failure, pulmonary toxicity (hypoxaemia) over the first 48 hours

Mortality (% likelihood)

- Vomiting or oral burns = 50%

- Dithionite urine test: if -ve = < 5%; if +ve = 66%

+ve dithionite test AND creatinine >230 umol/L = 95%

+ve dithionite test AND > 115 umol/L Cr rise in 24hrs = 95%

- Generalized peripheral burning sensation at 24 hrs = 75%

Management - Please discuss ALL significant exposures with a Clinical Toxicologist

TIME CRITICAL EMERGENCY

Decontamination takes priority over resuscitation / hospital transfer (food, 50 g activated charcoal, soil mixed with water as a slurry)

Do not administer oxygen unless SpO2 < 90%

Haemodialysis is time dependent: may be beneficial up to 24 hours post exposure

- Haemodialysis is most likely to be beneficial within first 4 hours

There may be some benefit from a number of additional therapies (Please discuss with Toxicologist)

N-acetylcysteine (whilst hospitalised)

- Dose as per paracetamol OD Rx guidelines followed by infusion 150 mg/kg/24 hours for two weeks

Methylprednisolone

- 1 g IV daily for three days

FOLLOWED BY

Dexamethasone

- 8 mg IV/PO tds continued for at least two weeks

Disposition

- Patients who are clinically well without oral burns and two -ve dithionite tests six hours apart are unlikely to have experienced a significant exposure (discuss with a Clinical Toxicologist)

- Patients who have ingested > 50 mg/kg with early multi-organ failure should be palliated