Caustic/Corrosive Ingestion

Caustics/corrosives include strong acids and alkalis. Ingestion can cause life-threatening airway compromise and severe GI tract injury.

Toxicity / Risk Assessment

Severity is determined by amount ingested, concentration, pH and tissue contact time. Deliberate self-poisoning or accidental small volume ingestion of highly corrosive agents can cause serious injury. Solids are likely to lead to a longer tissue contact time and produce more injury than liquids.

- Strong acids (pH<2) e.g. metal cleaners, toilet bowl cleaners
- Strong alkalis (pH >12) e.g. oven and drain cleaners
- Small exposures to dilute household bleach, detergents, or ammonia are unlikely to cause major effects

Clinical features: (asymptomatic to life-threatening)

- **Upper airway burn:** stridor, drooling, coughing, oedema
- **Oral mucosal injury:** erythema, ulceration, pain

(absence of oral burns does not exclude GI injury)

- **GI effects:** vomiting, chest/abdominal pain, risk of oesophageal or gastric perforation
- **Mediastinitis, peritonitis**
- **Late sequelae:** GI stricture

Management

Airway: Intubate early if signs of airway compromise. Prepare for difficult airway or surgical airway

Decontamination: No role for activated charcoal, neutralisation fluids, or blind insertion of NGT

Keep nil by mouth for at least 6 hours before trial of oral fluids (provided patient is asymptomatic)

Investigations in high-risk exposures

- CT chest/abdomen - Upper GI endoscopy

Discuss with gastroenterology/surgical team:

- All symptomatic patients following oral exposure to a highly corrosive agent
- All intentional ingestions of strong alkalis
- Patients with suspected GI perforation/respiratory compromise/peritonitis/mediastinitis
- Patients requiring ongoing analgesia or unable to tolerate oral intake 4-6 hours post exposure

- Timing of endoscopy should be discussed with local gastroenterology team
- Endoscopy is contraindicated in cases with known or suspected perforation

Supportive care

- Consider corticosteroids in cases with airway involvement
- Corticosteroids may reduce GI stricture formation in selected cases, but are not routinely used in cases as they may increase risk of perforation.
- Proton pump inhibitors and H2 antagonists are often used but have no proven benefit.

Disposition

- Discharge pending mental health review if asymptomatic + tolerating oral intake 6 hrs post ingestion