

# **NHS** Children's Acute Transport Service



## Clinical Guidelines

# Poisoning

### Document Control Information

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## 1. Assessment

### **Ascertain the nature and time of poisoning if known. Remember hazmat procedures may apply.**

Always check the National Poisons Information Service (NPIS) online database

<http://www.toxbase.org>

For further information, contact the National Poisons Information Service (**Tel 0344 892 0111**) for advice.

## 2. Immediate management

### Initial management

- Secure airway
- Give high flow O<sub>2</sub>
- Heart rate, respiratory rate and respiratory pattern may give clues as to the nature of the poisoning and should be accurately recorded
- Treat shock with fluid boluses. Inotropes should be used with caution, as they may be pro-arrhythmic in combination with poisons, consider vasopressors
- Assess conscious level. Commence frequent neurological observations
- An ECG should be performed for all cases of tricyclic antidepressants (TCA) overdose and where the full history of poisoning is uncertain. QRS prolongation is an early sign of cardiovascular involvement
- Urine must be sent as soon as possible for toxicology
- The possibility of more than one poison should always be considered
- **Emesis is no longer recommended and is contraindicated with volatile substances**
- Consider gut decontamination. Follow Poisons Centre advice with regard to charcoal administration

### Anion Gap:

Blood gas analysis and anion gap  $\{(Na^+ + K^+) - (Cl^- + HCO_3^-)\}$  should be performed. Elevated anion gap (>16) is seen with methanol, ethanol, ethylene glycol, salicylates, ketones and iron poisoning (secondary to increased lactate).

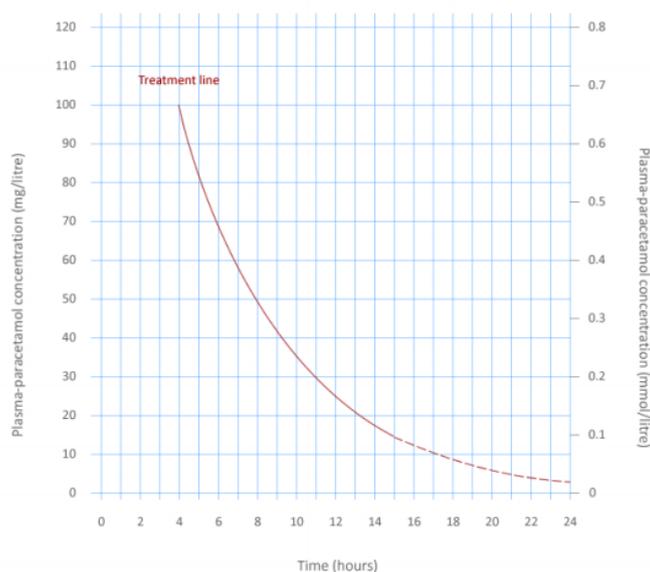
### Osmolar gap:

Osmolar gap =  $(2 Na + Urea + Glucose) - \text{measured osmolar gap}$ . Gap > 20 is significant. This is seen with methanol and ethylene glycol.

## 2.2 Specific treatments

Specific antidotes (N-acetylcysteine for paracetamol, desferrioxamine for iron, pralidoxime and atropine for organophosphates) should be given after discussion with the NPIS.

- Opiates: Naloxone may be considered if opiate poisoning is likely
- Salicylate or Tricyclics: alkalinisation with bicarbonate (1mmol/kg boluses) should be considered
- Paracetamol:
  - Attain history of timing and dose taken. Serum level, at least 4 hours post ingestion, with AST/ALT, U+E, creatinine, blood gas, lactate, clotting
  - If hepatotoxic dose ingested (>75mg/kg) consider activated charcoal
  - Discuss management algorithms for acute, staggered and repeated supratherapeutic ingestions and modified release formulations with medical toxicologist (Toxbase)
  - If presenting at 4-8 hours the level should be plotted on graph below and treatment started with N-acetylcysteine (NAC) if the level is above the line
  - Start NAC empirically if: patients present >8 hours after ingestion, serum paracetamol levels are not available within an 8 hour time window, uncertainty over timing of overdose, patients are unconscious or have a suspected overdose



- Refer to CATS Liver failure guideline

### 3. Indications for intubation in cases of poisoning

- GCS  $\leq$  8
- Impaired airway reflexes
- Altered level of consciousness
- Severe cardiovascular compromise

### 4. Management following intubation

- Ventilate to normal parameters
- Monitor glucose levels and temperature
- Neurological observations must be performed and seizures treated
- Give sedation if necessary. Consider possible interactions with suspected poison

### 5. Transport considerations

- Ensure that the receiving hospital is informed immediately if it is likely that haemodialysis will be required (theophylline, methanol)
- Draw up emergency drugs as appropriate, especially with cardiotoxic poisoning
- Consider applying 'hands free' defibrillator pads for transport (especially TCA/dysrhythmic agent overdose)

### References:

Toxbase [www.toxbase.org](http://www.toxbase.org) you will need your institutions log in details, usually held by your Accident and Emergency Department.

