

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 O₂
- 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.
- 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. Carefully 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:

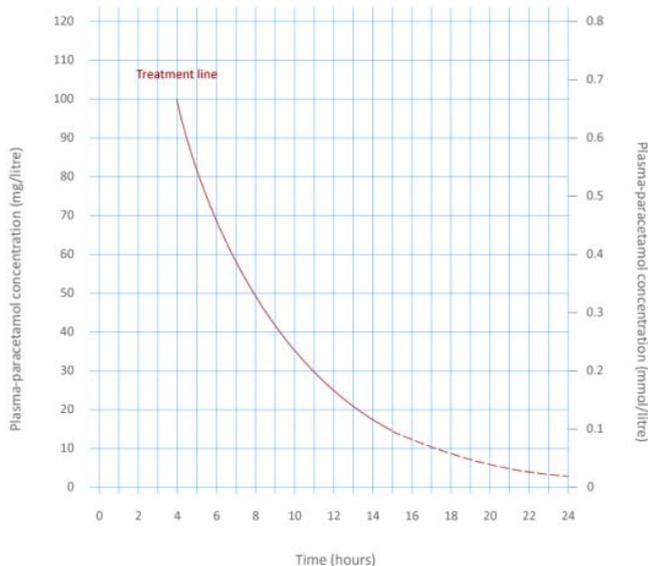
Osmolar gap = $(2 Na + Urea + Glucose) - \text{measured osmolar gap}$. Gap > 20 is significant. This is seen with methanol and ethylene glycol.

2.2 Specific treatments

- Opiates: Naloxone may be considered if opiate poisoning is likely.
- Salicylate or Tricyclics: Alkalinisation with bicarbonate (1mmol/kg boluses) should be considered.

2.2.1 Paracetamol:

- Attain history of timing and dose taken. Serum level, at least 4 hours post ingestion, with AST/ALT, U+E, creat, 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.



- Specific antidotes (N-acetylcysteine for paracetamol, desferrioxamine for iron, pralidoxime and atropine for organophosphates) should be given after discussion with the NPIS.
- 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 You will need your institutions log in details, usually held by your Accident and Emergency Department.