NHS Children's Acute Transport Service

Clinical Guidelines

Poisoning

Document Control Information

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Applicable to	**All CATS employees**		

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 0844 892 0111)** for advice.

2. Immediate management

2.1 Initial management

2.1.1 Secure airway

2.1.2 Give high flow O_2

2.1.3 Heart rate, respiratory rate and respiratory pattern may give clues as to the nature of the poisoning and should be accurately recorded.

2.1.4 Treat shock with fluid boluses. Inotropes should be used with caution, as they may be pro-arrhythmic in combination with poisons.

2.1.5 Assess conscious level. Commence frequent neurological observations

2.1.6 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.

2.1.7 Urine must be sent as soon as possible for toxicology.

2.1.8 The possibility of more than one poison should always be considered.

2.1.9 Emesis is no longer recommended and is contraindicated with volatile substances.

2.1.10 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) – measured osmolar gap. Gap > 20 is significant. This is seen with methanol and ethylene glycol.

2.2 Specific treatments

2.2.1 Opiates: Naloxone may be considered if opiate poisoning is likely.

2.2.2 Salicylate or Tricyclics: Alkalinisation with bicarbonate (1mmol/kg boluses) should be considered.

2.2.3 Paracetamol:

There is a recent review of paracetamol overdose step-by-step, BMJ Best practice 5/8/15

Summary:

Attain history of timing and dose taken. Serum level, at least 4 hours post ingestions, with AST/ALT, U+E, creat, blood gas, lactate, clotting.

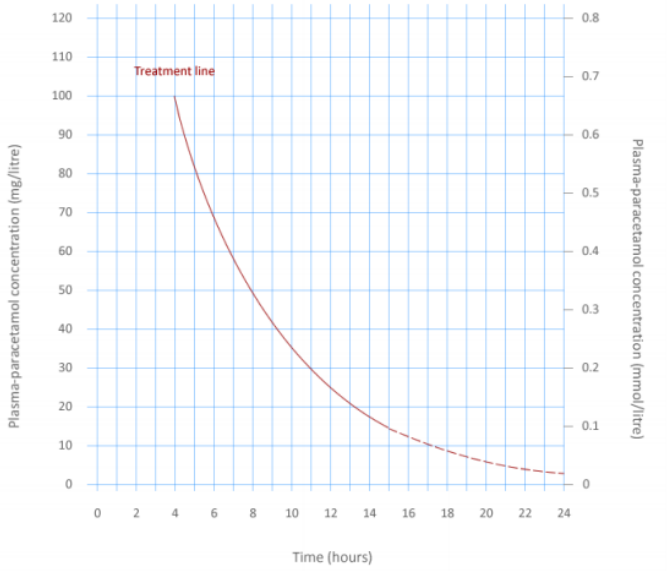
If hepatotoxic dose ingested (>75mg/kg) consider activated charcoal.

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.



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

3. Indications for intubation in cases of poisoning

3.1 GCS ≤ 8

3.2 Impaired airway reflexes

3.3 Altered level of consciousness

3.4 Severe cardiovascular compromise

4. Management following intubation

4.1 Ventilate to normal parameters

4.2 Monitor glucose levels and temperature

4.3 Neurological observations must be performed

4.4 Give sedation if necessary. Consider possible interactions with suspected poison.

5. Transport considerations

5.1 Ensure that the receiving hospital is informed immediately if it is likely that haemodialysis will be required (theophylline, methanol).

5.2 Draw up emergency drugs as appropriate, especially with cardiotoxic poisoning.

5.3 Consider applying 'hands free' defibrillator pads for transport (especially TCA/dysrhythmic agent overdose).