ASPIRIN (SALICYLATE) POISONING

- Coma or seizures are uncommon and indicate either severe toxicity or a mixed overdose
- Urinary alkalinisation is much more important than diuresis.
- Chronic poisoning results in clinical toxicity at much lower levels than acute toxicity

Signs

1. Tinnitis, fever, sweating, tachycardia
2. Nausea & vomiting, haematemesis and dehydration
3. Hyperventilation because of direct brainstem stimulation
4. Metabolic acidosis
5. Lethargy
6. Seizures & coma (+ respiratory depression)
7. Hyperglycaemia

Investigations

1. U & E, Creatinine, coagulation profile, FBC, ABG, LFTs
2. Salicylate concentration (see Done nomogram Pediatrics 1960; 26: 800-7)

Management

1. ABC
2. Repeat dose charcoal
3. Consider lavage for severe poisoning with enteric coated tablets or suspected bezoar formation
4. Correct acidosis with bicarbonate
5. Asymptomatic children or level < 400 mg/l only require iv fluids and electrolyte correction
6. Symptomatic children with respiratory acidosis require IPPV
7. If salicylate concentration high (400-700 mg/l) then alkaline diuresis
   - 500 ml 5% dextrose + 40-80 mmol sodium bicarbonate as maintenance fluid
   - titrate bicarbonate content to maintain urinary pH 8-8.5
   - forcing a diuresis with additional fluid has no extra benefit
   - hypokalaemia may impede urinary alkalization
8. Severely symptomatic children or salicylate concentration > 700 mg/l
   - extensive resuscitation and electrolyte correction
   - consider haemodialysis especially if renal failure, pulmonary oedema, severe acid-base and electrolyte abnormalities, persistent CNS signs