Hypernatraemia Guideline

Document Information

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Hypernatraemia Guideline

Definition
Sodium concentration greater than 145mmol/L. Usually hypernatraemia only becomes clinically significant if sodium concentration is greater than 154mmol/L or there is a rapid rise in sodium concentration (> 20mmol/L in 24 h)

Symptoms/Signs

- Altered mental status
- Lethargy
- Fever
- Nausea
- Vomiting
- Seizures
- Coma

Common Causes

- Inadequate fluid intake, dehydration
- Non-ketotic hyperglycaemia (HONK)

More Rare Causes

- Diabetes Insipidus
- Conn’s syndrome
Lithium therapy

Acute sodium poisoning through oral / IV intake

Hypodipsic hypernatraemia (thirst centre affected)

### Spurious

- Sampling error
- Contamination with sodium salts
- Evaporation of sample

Please note this list is not comprehensive and other causes may need to be considered.

### Clinical Assessment

Assess fluid status and fluid balance charts

**Dehydration – Findings**

- Oliguria (<400ml/24 hours)
- Urine concentrated (Osmolality > 1000mmol/kg - In elderly patients urinary concentrating capacity may fall to less than 700mmol/kg)

**Diabetes insipidus**

- In diabetes insipidus the urine is not concentrated and there will be large volumes (often greater than 3L/24hour)

### Initial Investigations

**Plasma**

- Sodium
- Potassium
- Urea
- Creatinine
- Glucose
- Osmolality

Urine (random, no preservative)
- Sodium
- Potassium
- Urea
- Creatinine
- Osmolality
- Dipstick: glucose, ketones

Measure 24-hour urine excretion if diabetes insipidus is suspected.

**Further Investigations**

? Diabetes Insipidus
? Conn’s Syndrome

If all common causes of hypernatraemia have been excluded and you suspect Diabetes Insipidus, please contact either a Consultant Endocrinologist or the Duty Biochemist for further advice on investigation and possible water deprivation testing.

**References**


**Disclaimer:** These guidelines have been registered with the Trust. However, clinical guidelines are guidelines only. The interpretation and application of the clinical guidelines will remain the responsibility of the
individual clinician. If in doubt contact a senior colleague or expert. Caution is advised when using guidelines after the review date.