KISS: Hyponatraemia

Based on BMJ Best Practice 2018 & NICE-CKS 2015

• Classification: Acute (<48 hours) or chronic (>48 hours)
  o Mild, Na 130 - 135 mmol/l
  o Moderate, Na 125 - 129 mmol/l
  o Severe, Na < 125 mmol/l

• Symptoms
  o Depend on severity and speed of onset; mild and chronic usually asymptomatic
  o Severe and acute are symptomatic, cerebral oedema may occur once Na < 125
  o Symptoms include headaches, malaise, fatigue, nausea and vomiting, cramps, unsteadiness and falls, cognitive problems, confusion, delirium & seizures

• Causes
  o Manifold potential causes, but essentially due to relative excess of water to sodium causing decreased plasma osmolality
  o Three main categories depending on fluid status
    • Hypovolaemic, due to excessive sodium loss from GI tract (e.g. d & v), skin (e.g. sweating) or renal (e.g. drugs or Addison’s disease)
    • Hypervolaemic, due to excessive fluid retention e.g. heart failure, kidney failure, nephrotic syndrome, liver failure
    • Euvolaemic, due to inappropriate ADH secretion; may be caused by malignancy, respiratory, neurological or endocrine disease; low solute intake (‘tea & toast diets’) maybe a cause
  o Drug causes include diuretics, SSRIs, carbamazepine and less commonly PPIs, antipsychotics, TCAs, opiates, NSAIDs and ACEi/ARBs

• Management
  o Careful clinical assessment including for possible underlying causes and volaemic status
  o Admit if acute, severe, symptomatic, significant hypovolaemia or suspect Addison’s
  o Specialist advice if moderate and asymptomatic
  o Primary care management if asymptomatic and mild, repeat and review
    • Check wider range of bloods including TSH, lipids, glucose, proteins
    • Check plasma and urine osmolality and urine Na
      • serum osmolality low (<275 mOsmol/kg), urine osmolality high (> 100 mOsm/kg) and urine Na high (>30mmol/L) suggests SIADH if they are euvolaemic & excessive Na loss if they are hypovolaemic
    • Stop causative medication if possible & repeat after 2 weeks
    • If intercurrent illness treat & repeat after 2 weeks
    • If SIADH, arrange tests or refer as appropriate to find underlying cause e.g. consider CT chest, abdo, pelvis for underlying malignancy