Hyponatraemia and antidepressants

Dr Daniel Harwood

Croydon Memory Service

South London and Maudsley NHS Foundation Trust

Outline of Talk

1. What is hyponatraemia?
2. Simple classification
3. Hyponatraemia in antidepressants
    1. who gets it ?
    2. which drugs cause it?
4. Prevention
5. Management

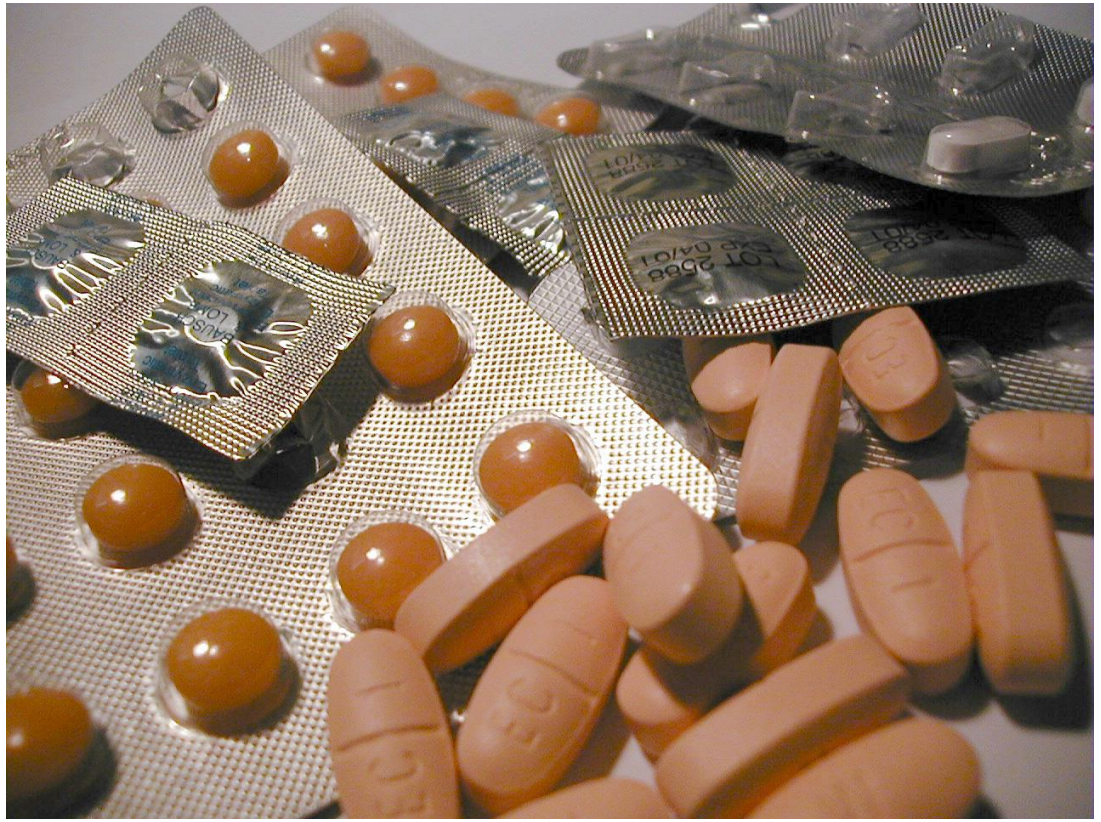
Hyponatraemia

- Normal Range 136-145 mmol/l

- 130-135 mild
- 125-129 moderate
- Less than 125 severe

Hyponatraemia

- common (18% of nursing home population)
- dangerous – can lead to seizures, delirium and coma
- symptoms can be mild and non-specific (lethargy, dizziness, nausea)
- and do not correlate well with plasma levels
- and we are responsible for it (some of the time..)



Hyponatraemia – classification

- Too much water in- water intoxication
- Too little water out - too much ADH
- Too little sodium in - eg poor IV fluid management post-op
- Too much sodium out – aldosterone or cortisol deficiency OR diuretics OR diarrhoea/burns/vomiting

- Most drugs which cause hyponatraemia do so through triggering inappropriate ADH secretion

Hyponatraemia and antidepressants - who is at risk ? Farmand et al 2018, NICE CKS 2015

- Older people
- Women
- Low body mass
- Medical co-morbidity – cardiovascular, respiratory, renal
- People on other drugs which can cause low sodium
  - Diuretics
  - Psychiatric meds- antipsychotics, sodium valproate, carbamazepine
  - Others- NSAIDs, vincristine, omeprazole, amlodipine, angiotensin converting enzyme inhibitors

Which drugs are most likely to cause low sodium? Maudsley Prescribing Guidelines, Leth-Moller et al 2016

Higher risk

- SSRIs (all of them) - > 5%
- SNRIs- venlafaxine and duloxetine
- Tricyclics – noradrenergic eg nortriptyline, lofepramine, may be safer

Lower risk

- Mirtazapine- about 2.5%
- MAOIs – moclobemide

- The risk is greater in the first 2-4 weeks after starting, incidence back to population baseline after 3 months

Prevention

- In older frail people use non-drug alternatives for depression where you can
- Stop antidepressants where they are no longer needed
- When prescribing an antidepressant for an older frail person – check sodium before starting and after 2 weeks after if possible

Management NICE CKS

- Na less than 125, OR symptomatic, OR hypovolaemic- admit
- Na 125-129 and asymptomatic – get physician advice
- Na 130-135 – can be managed in primary care

Specific treatments

- Monitor Na closely
- Treat any acute illness
- Fluid restriction
- ADH antagonists eg tolvaptan – under specialist guidance only
- Review meds, consider non-drug treatments or mirtazapine, moclobemide
- GO SLOW- RAPID RISES IN SERUM SODIUM (more than 10mmol/l/24h)CAN CAUSE CENTRAL PONTINE MYELINOLYSIS

References

Maudsley Prescribing Guidelines 13th Edn Taylor et al 2018

Understanding hyponatraemia
www.youtube.com/watch?v=8y64XmyiZcs

NICE Clinical Knowledge Summary- hyponatraemia
https://cks.nice.org/topics/hyponatraemia