Addison's disease

- Addison s disease is autoimmune adrenal failure.
- Affects 1 in 14000.

Disclaimer:
Read the disclaimer at medimaps.co.uk/disclaimer

References:
1. Red Whale, GP Updade.
2. Addisons.org.uk
3. Dr Parijat De, PULSE conference April 2023.

- Incorrectly identified as depression or an eating disorder until an infection precipitates a crisis.
- Can mimic gastroenteritis. 1/3 have had previous hospital treatment for such an infection prior to diagnosis without their condition being recognised.
- In pregnancy, Addisonian symptoms may be attributed to hyperemesis and chloasma.
- Exogenous steroid use may mask symptoms and affect blood test results.

Stopping steroids for ***NON-ADDISON'S ***

- Usually adrenal glands produce equivalent to prednisolone 7.5mg daily.
- Under stress doubles to 15mg.

- Must gradually withdraw corticosteroids if any of following:
- Received more than 40mg prednisolone (or equivalent) daily for > 1/52.
- Repeat doses in the evening.
- > 3/52 of treatment.
- Recently received repeated courses (particularly if taken > 3/52).
- Taken a short course within 1y of stopping long-term therapy.

- Can ↓ dose rapidly to physiological doses (equivalent to prednisolone 7.5mg daily) and then reduce more slowly.

Sick day rules.
- In serious illness (not URTI):
- If on <15mg prednisolone equivalent, we increase to 15mg.
- If on ≥15mg prednisolone equivalent, no dose increase is required.
- If not able to tolerate oral prednisolone, administer 100mg hydrocortisone IM.

Symptoms

STABLE/EARLY PRESENTATION

A lways tired
A bdominal pain
D rop in blood pressure on standing
I nexplicable weight loss
S kin colour changes (hyperpigmentation, often in areas of friction)
S alt craving
O nly eating sparingly (anorexia)
N o strength in hands/limbs
S ick or nausea

- It is rare for all of these to be present.

ACUTE ADRENAL CRISIS

- Vomiting.
- Profound muscle weakness.
- Postural hypotension.
- Headache.
- Drowsiness.
- Coma.

Management

- Admit STAT via 999.
- IV fluids.
- IV steroids.
- IV Abx.

Investigations

- 20mmHg BP drop on standing.
- Proximal weakness (stand from sitting with arms crossed).
- Hyperpigmentation (area of friction or oral mucosa).
- UE's (↓ Na+, ↑ K+).
- Blood glucose (low).
- 9am cortisol and ACTH.

- <100nmol/L diagnosis highly likely. → - Refer endocrinology.

- >400nmol/L diagnosis unlikely (not excluded if patient acutely unwell at the time).

- 100 400nmol/L diagnosis possible. → - Perform short synacthen test (SST). - Or refer if unable to perform.

- > 700 nmol/L it's not going to be Addisons.

Note: Random cortisols have a low sensitivity for adrenal insufficiency.

Note:
- Prednisolone interferes with the SST result.
- Dexamethasone does not affect SST result if performed shortly after starting dexamethasone.

- Synacthen is a synthetic polypeptide mimicking adrenocorticotrophic hormone (ACTH).
- SST =
- Step 1) Blood test for cortisol.
- Step 2) Inject synacthen 250mcg IM.
- Step 3) 30 min later another blood test for cortisol.

- Normal response if adrenals are producing adequate amount of natural steroid:
- Cortisol ↑ by >200nmol/L
OR
- Cortisol >450-550nmol/L at 30min.

- Abnormal response:
- Long synacthen test.

Management

- Refer to endocrinologist to diagnose and start treatment.

Steroids

- Will be started on steroids, and once stable ask 1o care to take over prescribing.

- Hydrocortisone tablets, to replace cortisol.
- 15 25mg daily in 2 3 divided doses.
- e.g. 10mg, 5mg, 5mg trying to mimick normal physiological variation of steroid levels.

- Fludrocortisone, to replace aldosterone and prevent postural hypotension.
- 50 200mcg daily in 1 2 divided doses.

Only for emergency to prevent adrenal crisis
- Hydrocortisone sodium phosphate 100mg/1ml IM
OR
- Hydrocortisone sodium succinate 100mg + 2ml vial of water IM
- Issue 3 5 vials in case of breakages.
- Blue IM needles and 2ml syringes.
- DO NOT use hydrocortisone acetate (hydrocortistab), it is slow acting and for joint injections.

Priority patient

- Should be given priority if unwell and contacts the GP surgery.

Sick day rules

- Pt and family need to understand sick day rules, and how to administer IM.

- Fever (>37.5oC) or infection needing Abx = double dose of hydrocortisone. e.g. If usally taking hydrocortisone 20mg daily, then make it 40mg until feeling well.
- Nausea = additional hydrocortisone 20mg, and sip dioralyte.
- Vomiting (even once) = Use emergency injection STAT and call the doctor.
- Major injury = additional hydrocortisone 20mg STAT.
- Invasive procedures = e.g. surgery, dental work, endoscopy, ensure the team is aware of your condition and the need for additional hydrocortisone, and has checked the surgical guidance.

Travel

- A letter will be required by airport security for travel purposes.
- Recommended to carry double the usual supply of meds.

Awareness

- Wear a medic alert bracelet.
- Register with the local ambulance service as having a steroid-dependent condition.
- Most ambulance trust need a letter from a GP to confirm the diagnosis and treatment required. Attach 'ADSHG crisis guidelines' document to your letter, from addisons.org.uk.

Flu vaccine annually

Hypertension

- 10% develop HTN.
- ACEi or CCB are preferred.