Prolactinaemia

- Pituitary contains lactotroph cells that produce prolactin, the hormone that stimulates lactation (production of breast milk).

- Raised prolactin due to:
- Antipsychotics.
- Oral oestrogen.
- Hypothyroidism.
- Prolactinoma.

Disclaimer:
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References:
1. UpToDate accessed Dec 2020
2. Biochemist Walsall NHS

Prolactinoma

- Aka prolactin-producing adenomas, are benign tumors of the pituitary gland that produce excess prolactin levels.
- The high prolactin levels cause symptoms.
- Or if adenoma compresses structures.

- More common in women <50y.
- If < 1cm = microadenoma.
- If >1cm = macroadenoma.

Symptoms

- Two groups of symptoms.
a) Due to ↑ blood prolactin levels
b) Due to compression of the normal pituitary and surrounding tissues.

- The excess prolactin interferes with the secretion of other hormones from the pituitary gland that control the function of the ovaries in women and the testicles in men.
- Hence, it causes symptoms in premenopausal women, but not in women who are post menopausal, since their ovaries have already stopped functioning.

Women

- ↓ secretion of estradiol.
- Irregular or absent periods.
- Infertility.
- Menopausal symptoms.
- Osteoporosis.
- Milk discharge from the breasts.

Men

- Low testosterone causes decreased energy, labido, muscle mass and strength, anaemia.
- Osteoporosis.
- Erectile dysfunction.
- Breast tenderness and enlargement.

- Affects peripheral vision.
- Decrease TSH and adrenal stimulating hormone.
- Headaches.

Investigations

- MRI.

Management

- Watch and wait if small.
- Medication (dopamine agonists) for most cases to ↓ prolactin levels.
- If fails, surgery, rarely radiotherapy.

- Bromocriptine.
- Cabergoline.

- Case study from private 'general' consultant.
- Cabergoline dose = 250mcg twice a week.
- Titrate according to prolactin level.
- If remains in normal range can ↓ to 250mcg once a week.
- If still raised then leave on 250mcg twice a week.
- If prolactin continues to ↑ on this dose then ↑ the dose by 500mcg to the max dose of 2mg once a week.
- Refer to an endocrinologist.

Antipsychotics

- Pt on antipsychotics with a raised prolactin level.
- If the prolactin levels are raised then they automatically check the macroprolactin levels.
- If these are normal then it suggests that it s pure prolactin in the bloodstream, of which there are 3 causes:

A) female hormonal issues - breast feeding etc

B) pituitary adenoma - so ask the patient re headache, double vision etc

Refer to endocrinology

C) raised because of antipsychotics which have an effect on dopamine

- If no headache etc then recheck in 8/52 and if > 30% ↑ then look at reducing the antipsychotic or refer back to psych.