## A case of abnormal pituitary function tests: iatrogenic or pathogenic?

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### Case History:

A 27 year old female patient was referred to the endocrinology outpatient clinic for follow up of investigations performed during a recent admission. She had presented with an exacerbation of longstanding loin pain/haematuria syndrome, with increased abdominal pain and vomiting. This had been slow to settle, precipitating further investigation including a failed short synacthen test (SST).

She reported chronic fatigue and postural light-headedness. Her weight was stable. She had been constipated since opiates had been commenced. She had been amenorrhoeic for two years. She denied polydipsia, new headache or visual symptoms.

Past history included loin pain/haematuria syndrome and asthma. Medication list on discharge was hydrocortisone (prescribed as a result of her failed SST) methadone (prescribed by pain team), morphine sulphate, dihydrocodeine, paracetamol, diclofenac, cyclizine, temazepam, hyoscine, senna and a salbutamol inhaler.

There was no family history of endocrine disease. She has no children. She is an ex-smoker who does not drink alcohol or abuse illicit drugs.

On examination in clinic she was overweight, but not Cushingoid. There was no intra-oral or palmar pigmentation. There was no postural drop in blood pressure (on hydrocortisone replacement). General examination was normal. Visual fields were full to confrontation.

### Results and management:

Tests performed as an inpatient showed SST with baseline cortisol < 50 nmol/l, 30-minute cortisol 178 nmol/l, adrenocrticotrophic hormone < 10 ng/l. $T_4$ was 12 pmol/l. Prolactin was 873 mU/l. LH was < 0.5, FSH 1.2 U/l, oestradiol < 50 pmol/l. Ferritin was 86 ug/l and ACE 40 U/l. An MRI of pituitary was normal.

A subsequent detailed drug history revealed use of a seretide 500 inhaler, with imperfect compliance. Furthermore, she had been on depo-provera, with the last injection given 10 months previously. During her admission she had been on multiple anti-emetic agents including metaclopramide.

Repeat prolactin levels, off dopamine antagonists, are now within normal range. The seretide dose is being reduced under GP supervision and the SST will be repeated.

### Conclusion and points for discussion:

Differential diagnosis includes effects on multiple pituitary hormonal axes by different medications and intrinsic pituitary pathology such as lymphocytic hypophysitis (although MRI was normal) or isolated ACTH deficiency.

A detailed medication history is mandatory in the evaluation of pituitary disease.