A case of abnormal thyroid function test leading to diagnosis of pituitary tumour

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Case history:

A 60 year old man presented to the gastroenterology clinic with a 6 month history of weight loss of 10 kilograms, intermittent diarrhoea, muscle aches and joint pains. He has had liver transplant 10 years ago for alcoholic cirrhosis and has been abstinent since. His past medical also included hypertension and hyperlipidemia. His medications included atenolol, tacrolimus and mycophenolate. Simvastatin was stopped recently by his general practitioner with some improvement of his symptoms. He was pale and had a Mercedes Benz scar from previous surgery.

Investigation and method:

Subsequently the gastroenterologists organised a series of blood tests including full blood count, urea and electrolytes, liver function tests, haematinics, C-reactive protein, ESR, and thyroid function tests. An upper and lower GI endoscopy and CT scan of his whole body were also organised.

Results and treatment:

His whole body CT scan, upper and lower GI endoscopies were normal. His blood tests showed Hb 118 g/L, WCC 3.9 10*9/L, neutrophil count 1.5 10*9/L, normal electrolytes, liver function tests, C-reactive protein, ESR and haematinics. However his thyroid function test returned as TSH 2.7, free T4 6 and free T3 4.1 pmol/L. This result was reviewed in the endocrine biochemistry multidisciplinary team meeting at the request of the biochemist and concluded as secondary hypothyroidism. Further investigations showed 9am testosterone <0.1 nmol/L, FSH 1.4 iu/L, LH <0.1 iu/L, prolactin 824 mu/L, IGF-1 83 ug/L, and 9 am cortisol 35 nmol/L. He then had an MRI pituitary scan that confirmed a 2.1*2.2*2 cm pituitary macroadenoma with distorsion of the optic chiasm.

He was commenced on steroid replacement therapy, namely hydrocortisone 10/5/5mg with good improvement of his symptoms. Subsequently he was reviewed urgently in the endocrine clinic and commenced on thyroxine 100 mcg and testogel 50mg/5g sachet once daily. Perimetry did not show any visual field defects. He now awaits review in the joint pituitary clinic with the neurosurgeons.

Conclusion and points for discussion:

This was an interesting case of a non functioning pituitary tumour with panhypopituitarism that presented to the gastroenterology department and investigated extensively for weight loss. This patient's funny thyroid test was brought to the attention of the endocrinology department by the alert biochemist and subsequently further investigations clinched the diagnosis. This case highlights how pituitary problems can present with variable symptoms to a different specialty and with funny thyroid tests.