Diagnostic fixation error: The hidden diagnosis of hypopituitarism in the patient with bell's palsy

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Background

In the acute medical setting, it can be easy to fixate on a single diagnosis even for the most experienced clinician.

The rate of diagnostic error has been estimated as high as 15% of medical cases [1]. Fixation error has been described by Fioratou et al as when one 'concentrates solely upon a single aspect of a case to the detriment of other more relevant aspect' [2]. The high profile case of Bromiley, where 'can’t intubate, can’t ventilate' situation was indeed a fixation error [3].

This case provides the ironic scenario of when the 'error' actually benefited the patient, in addition to highlighting the issue of diagnostic fixation error.

Case Report

A 55 year old lady was admitted with a 3 day history of right sided facial weakness and droop. Inability to close the right eyelid was noted. She had recent coryzal symptoms and myalgia. Chronic limb weakness bilaterally was noted. Her past medical history included spondylosis, previous road traffic accident and recent admission for collapse (at another hospital).

Observations on admission: Temperature 33.1 °C, Blood pressure 87/68mmHg, Heart rate 52 beats per minute, Oxygen Saturations 100% on air, Respiratory Rate of 12 breaths per minute.

On examination, there was normal cardiovascular and respiratory findings. Neurologically, there was no neck stiffness, power 4/5 in all limbs and no evidence of ocular dysfunction. Right ptosis was noted. Hyporeflexia was elicited in the lower limbs.

Initial investigations: Blood tests were unremarkable. Electrocardiogram highlighted sinus bradycardia.

CT and MRI head imaging showed no obvious major infarct or haemorrhage.

Given the above clinical history, she was diagnosed with Bell's Palsy and commenced on high dose oral prednisolone and aciclovir.

With ongoing treatment, her facial symptoms improved. Her vital observations also showed signs of normalisation.

Upon reviewing her regular medications, it was highlighted that she took hydrocortisone twice daily for unclear reasons.

After some exploration, we found that she had been previously admitted with collapse, hypotension and hypothermic.

Bloods tests on that occasion showed low serum cortisol, low prolactin as well reduced follicle stimulating hormone and luteinising hormone levels. Suboptimal response to Short Synacthen test (pre test 63nmol, 30 minutes later 347 and 1 hour later 406) noted. Reconstructed CT images of pituitary gland were reviewed and no structural abnormalities were noted. Likely diagnosis of a pituitary cause of adrenal insufficiency was made.

The patient subsequently completed the course of oral steroids and was discharged with a modified dose regime of hydrocortisone.

Discussion

In retrospective, we can see that the patient's vital observations did not fit her treated diagnosis. This case highlights a patient who had co-existing Bell's palsy and uncontrolled hypopituitarism. It was clearly co-incidental that the management of bell's palsy also aided her endocrinological issue.

Whilst there is no easy solution for diagnostic fixation, awareness of one's self fixation is a good start to reducing these errors.

References