A patient who presented unresponsive and unseated from the sella

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Introduction

Patients present very frequently with altered level of consciousness to the Emergency Department. Hypoglycaemia is probably the most common cause of endocrine and metabolic emergencies.[1] The syndromes and pathophysiology associated with hypoglycaemia in the absence of medication-related causes are numerous and can often present a diagnostic challenge.

Clinical case

We present a case where a 74 year old female presented to the emergency department following a witnessed seizure and profound hypoglycaemia (BM 1.1mmol/L) with an initial GCS 7/15. A collateral history was obtained and the patient had 4 days' feeling unwell with reduced oral intake and multiple 'vacant episodes'. An urgent CT head scan was unremarkable. Past medical history included hypothyroidism of several years duration for which she took T4 50mcg. Three months prior to admission her TSH was 2.25mIU/l.

Observations on arrival showed she had a temperature of 38.9 degrees, tachycardic and hypotensive. On examination of the chest, crepitations were heard on the left. A plain radiograph of the chest showed opacity of the left lower zone and she was treated for a community-acquired pneumonia and commenced on intravenous antibiotics and intravenous fluids. The seizures were initially thought to precipitated by severe hypoglycaemia due to systemic illness. Endocrine consultation however suggested the possibility of hypocortisolaemia and intravenous hydrocortisone was initiated with rapid clinical improvement. Pituitary blood tests are listed in Table 1. An MRI scan of the pituitary provided clear evidence of Empty Sella Syndrome (ESS) see Fig 1. and Fig 2.

Results

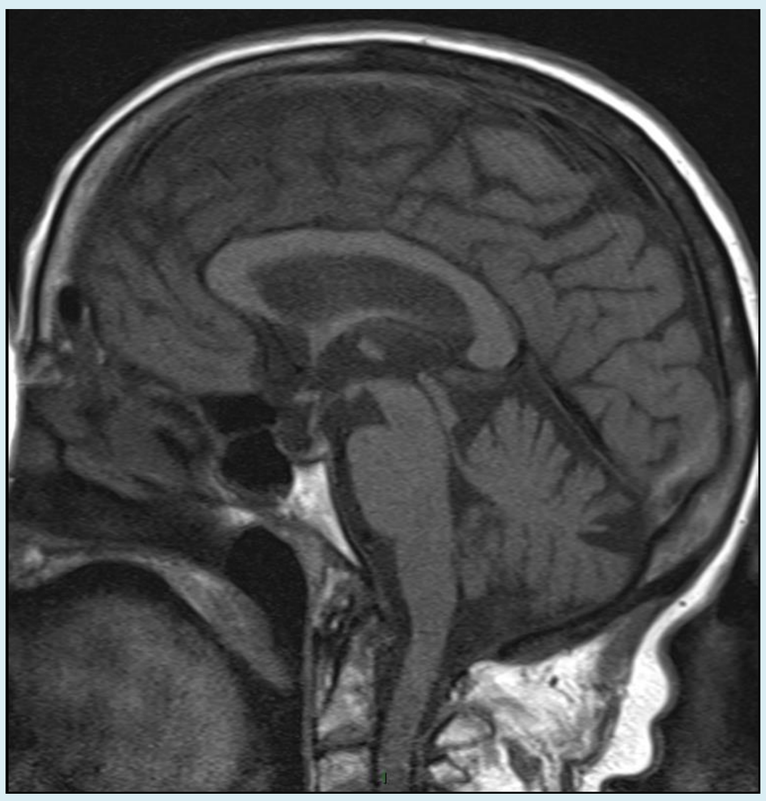

Figure 1. Pre-gadolinium

Test	Result
LH [16-75u/L]	5.6u/L
FSH [21-140u/L]	19.9u/L
Prolactin [59-619mU/L]	487mU/L
IGF [6-36nmol/L]	15nmol/L
Short Synacthen Test	Highly insufficient
60' Cortisol [>550nm/L]	143nmol/L
ACTH	<5ng/L unrecordable
Adrenal cortex antibodies	Negative

Table 1. Pituitary blood test results

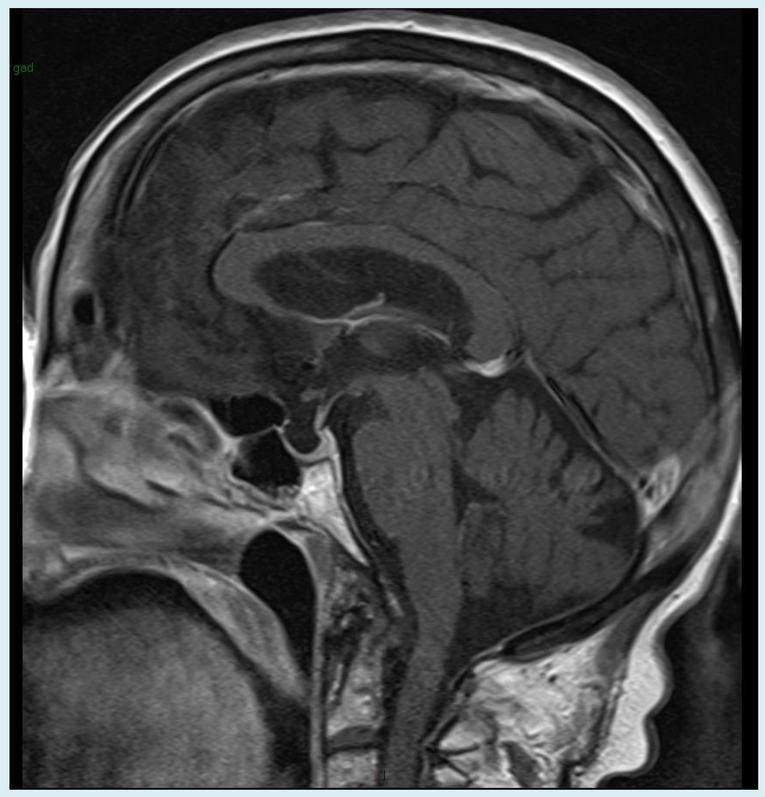

Figure 2. Post-gadolinium

MRI brain was suggestive of marked thinning of the pituitary gland with widening of sella filled with CSF. Findings were suggestive of ESS.

Discussion

The incidence and prevalence of hypopituitarism are estimated to be 4.2 per 100 000 per year and 45.5 per 100 000, respectively.[2] Although clinical symptoms of this disorder are usually unspecific, it can cause life-threatening events and lead to increased mortality.[2] The overall reported prevalence of ESS is 8-35% of the general population,[3] therefore one must always have a high degree of suspicion when presented with such a scenario. Sadly, there have been well documented cases of patients presenting unresponsive and hypoglycaemic with subsequent delays in diagnosis of hypopituitarism having serious repercussions.[4,5] Several papers have cited the link between hypoglycaemia and ESS or hypopituitarism. In the field of obstetrics, *Kumar et al*. found that women who have had excessive postpartum bleeding can present years later with hypoglycaemia and ultimately evidence of ESS.[5] Severe dehydration following diarrhoea can also lead to pituitary infarction causing hypopituitarism.[6] This case highlights the diagnostic challenges and difficulties in managing such patients. It emphasises that in all patients presenting with severe hypoglycaemia who are not taking any hypoglycaemic-agents, that ESS is a key differential diagnosis to be considered.

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