SEVERE HYPOGLYCAEMIA IN A WOMAN WITH SECONDARY HYPOADRENALISM AND AN ABNORMAL PITUITARY STALK, COMPLICATING METASTATIC BREAST CANCER

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BACKGROUND

Significant hypoglycaemia is a rare but well recognised presenting feature of secondary adrenal insufficiency. Such hypoadrenalism may be caused by intrinsic hypothalamo-pituitary disease (e.g. pituitary adenoma), exogenous steroid therapy, and rarely by hypophysitis and pituitary secondaries from malignant disease.

CASE PRESENTATION

A 73-year-old woman with a previous diagnosis of ulcerative colitis, presented acutely with confusion, agitation, and aggressive behaviour. She had been unwell for many months and had lost 3kg in weight unintentionally. She was on mesalazine and took no other medication. She did not smoke and drank alcohol rarely.
On examination she was thin and pale, had a pulse of 70/minute, blood pressure was 137/78 with no postural drop, and her temperature was 33.3 C. Systems examination was entirely normal. Paired capillary and venous plasma glucose levels (0.3 and 2.2 mmol/l respectively) were low. She was given intravenous dextrose immediately.

RESULTS OF INVESTIGATIONS

INVESTIGATION	RESULTS
Short Synacthen test	**Cortisol – 0 min 56; 30 min 297 nmol/l ****
Adrenal antibodies	Negative
Gonadotrophins and Oestradiol	**LH – 0.1; FSH 2.4 mmol/l; Oestradiol 37 ****
Prolactin	**734 ****
Thyroid function	TSH 0.81 mU/l; free T4 – 9.1 pmol/l
IGF1/IGF2 ratio, Gut hormone profile, Insulin antibodies	Normal
CA 15-3	**558 kU/l (<32) ****

Table 1
Results show hypoadrenalism, hypogonadotrophic hypogonadism and mild hyperprolactinaemia; marker for breast cancer +ve

Figures 1 and 2
Coronal and sagittal sections of contrast enhanced MRI scans of the pituitary showing a macroadenoma and a thickened pituitary stalk (red arrows)

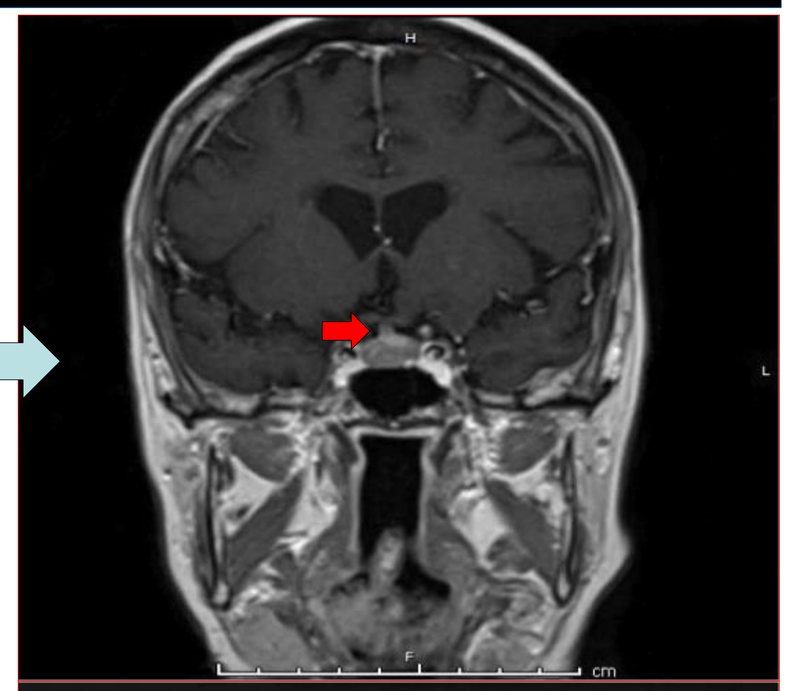
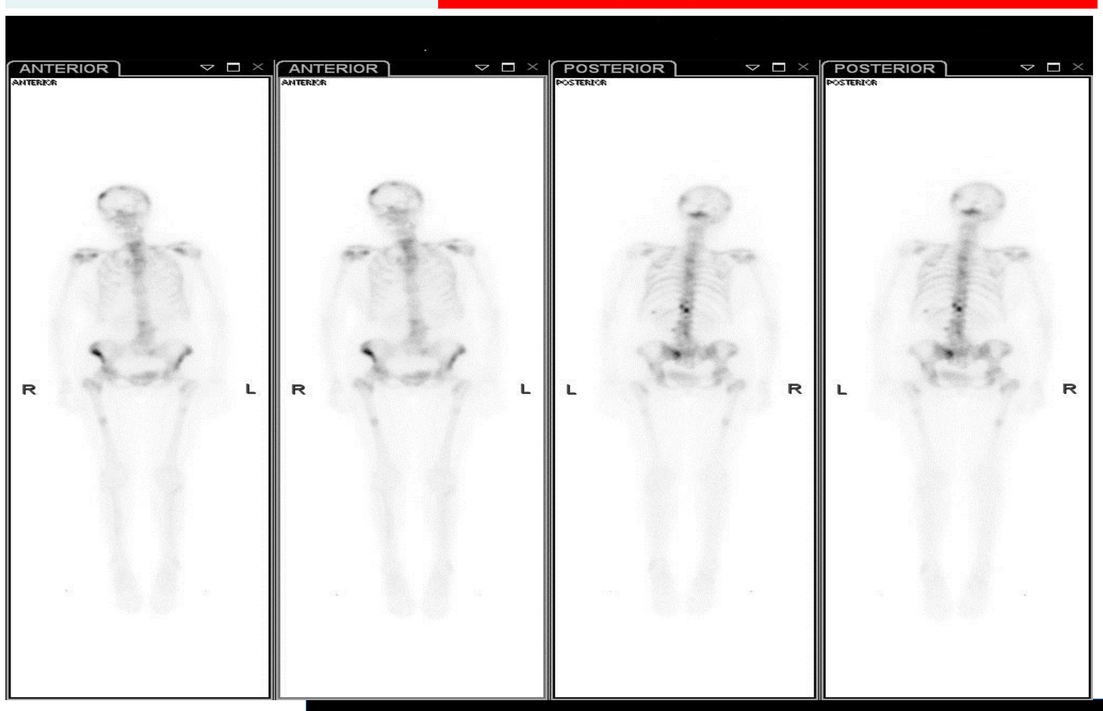


Figure 3
Nuclear magnetic bone scan showing multiple secondaries in the spine, skull and pelvis



A bone biopsy of the pelvis (red arrow), showed histological features consistent with secondaries from an adenocarcinoma of the breast (despite normal CT and mammography) **

Site of biopsy

CONCLUSIONS

(1) Severe hypoglycaemia is an uncommon presenting feature of secondary hypoadrenalism
(2) Secondary hypoadrenalism needs to be considered as a cause in the differential diagnosis of hypoglycaemia
(3) Our patient had partial anterior hypopituitarism likely due to pituitary metastases from a hitherto undiagnosed breast carcinoma.
(4) Although hypophysitis and a pituitary adenoma causing secondary hypoadrenalism are also possible, the findings of multiple bony secondaries and pituitary imaging features make pituitary secondaries likely
(5) The primary in this patient was an undiagnosed breast adenocarcinoma as proved by bone biopsy

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