The many faces of hypoglycaemia – Would you recognise all of them?

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Introduction

Hypoglycaemia is a diabetes and medical emergency. It is usually due to excessive dose of insulin or oral antidiabetic agents. Although rare, hypoglycaemia can be tumour-induced. Other causes include renal and liver failure, hormonal deficiency, antibodies to insulin, infection, starvation, spontaneous hypoglycaemia and reactive hypoglycaemia.

Case report

A 70 year old man presented with 6 months’ history of recurrent collapses; progressively worse over the last 3 months. He required frequent hospital admissions with hypoglycaemic seizures. He denied palpitations or chest pain. He was hypoglycaemic during every admission with glucose levels <2mmol/L, requiring treatment with i.m glucagon and iv dextrose.

Blood test results showed glucose 3.1mmol/L (<2mmol/L previous admissions), C-peptide <94pmol/L, low insulin level (1pmol/L), GH 0.38mcg/L, ketones (beta hydroxybutyrate) <0.05mmo/L, IGF-1 29.2nmol/L (1.5-35 ), and IGF-2 134.5nmol/L.

IGF2:IGF-1 4.5(<10); not hypoglycaemic at that time(glucose 5.5mmol/L. Short synacthen test was normal (Cortisol 255, 719).

Urine sulphonylurea screen was negative.

Methods - Case report

His background includes right sided pleural effusion, IHD, heart failure (EF 20%), hypertension and right sided lung tumour diagnosed in 2010.

His medications include aspirin, atorvastatin, candesartan, furosemide, omeprazole, paracetamol and eplerenone.

He was with prednisolone 30mg od and growth hormone 0.5mg od and radiotherapy to reduce tumour load.

Imaging - thoracic mass 21.8x19cm

Conclusion

Tumour-induced hypoglycaemia should be considered in the differential diagnosis in patients with active malignancy or past medical history of malignancy presenting with hypoglycaemia.

A combination of GH and prednisolone is most effective therapy in alleviating hypoglycaemia.

References