Case report

The diagnosis was in her birthday party!

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Case report

An 89-year-old lady was admitted to our hospital with a history of recurrent falls and episodic nocturnal confusion. Routine testing revealed capillary blood glucose levels fluctuating between 1.6 and 3.2 mmol/l (28.8–57.6 mg/dl). There was no history of diabetes mellitus and she was not on medications that could cause hypoglycemia. A detailed history and observation discounted the possibility of accidental or malicious hypoglycemia. Her confusion improved with glucogel (glucose 10 g/25-g tube) and taking frequent carbohydrate meals, thereby demonstrating Whipple’s triad (simultaneous symptoms and laboratory demonstration of hypoglycaemia with resolution of symptoms on achieving normoglycaemia). A biochemistry screen showed normal liver, renal, pituitary and adrenal function tests.

A review of her case notes revealed a diagnosis of ‘seizure disorder’ by a hospital specialist 4 years prior to this presentation, following an episode of witnessed generalized tonic-clonic seizure. This episode happened at a time of fasting prior to a family get together in a restaurant for her 85th birthday. She was brought to casualty where she was treated for hypoglycemia but this was not investigated further. She had also been found lying on the floor at night on at least two occasions with severe bruising to her face. The patient was started on lamotrigine for a ‘seizure disorder’. Her symptoms of episodic confusion persisted in spite of escalating the dose of lamotrigine. She had also gained a lot of weight over 4 years due to ‘eating a lot of sugary foods’.

Further investigations during this admission revealed laboratory glucose of 1.2 mmol/l (21.6 mg/dl), a simultaneous insulin level of 26.8 μU/l (normal range 0–13) and a C-peptide level of 1.13 nmol/l (normal range 0.4–0.8). A sulfonylurea screen was negative. A magnetic resonance imaging of pancreas showed the presence of a multicystic, lobulated, 4 cm diameter lesion in the uncinate process of the pancreas (Figure 1, yellow arrow), which in the clinical context was consistent with an insulinoma. In view of her age, she was treated medically with diazoxide 150 mg/day. She had a complete resolution of symptoms with no further episodes of hypoglycemia.

Seizure disorders in the elderly have their unique set of diagnostic and therapeutic challenges. Once branded as having ‘refractory epilepsy’, patients are subjected to escalating pharmacotherapy, which can result in significant side effects. In such patients, it is always vital to think of reversible metabolic causes of seizures, as they are potentially curable. The presence of nocturnal confusion, seizures associated with fasting and the weight gain should have raised suspicion of a hypoglycemic disorder, especially an insulinoma, in our case. In a case series of histologically confirmed insulinoma, 64% of patients were diagnosed with a neurological disorder, 39% with a seizure disorder and 12% were treated with anticonvulsants.¹ In another prospective study of 25 patients attending a neurology outpatient clinic with ‘funny turns’, 2 patients (8%) were proven to have an insulinoma and symptoms completely resolved after surgical resection.² In patients who are poor surgical candidates, diazoxide, which diminishes insulin secretion, is a useful drug to

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control hypoglycemia. In a survey of patients in the UK receiving diazoxide for an insulinoma, 59% of patients were symptom free and 38% of patients had only occasional symptoms. Our patient showed a dramatic improvement in symptoms since the initiation of diazoxide with no further admissions over a 9-month period. We suggest that hypoglycemia should be considered in all elderly patients with a diagnosis of seizures or ‘funny turns’. A thorough history and targeted investigations are highly rewarding.

Conflict of interest: None declared.

References