Adult spontaneous hypoglycaemia: preface

Hypoglycaemia in adults has many causes; however, in clinical practice it usually occurs in patients with diabetes over-treated with insulin or oral hypoglycaemic drugs. Although uncommon, it is important to recognise spontaneous (non-diabetic) hypoglycaemia and its aetiology because preventative or curative therapy is often available.

Spontaneous hypoglycaemia is not a diagnosis but a manifestation of underlying disease. Investigation of hypoglycaemia and suspected hypoglycaemia involves a high index of suspicion, confirmation or exclusion of hypoglycaemia and elucidation of the cause after confirmed hypoglycaemia.

The investigation of hypoglycaemia and suspected hypoglycaemia, however, is fraught with avoidable potential pitfalls (1-4):

(I) Failure to recognise subacute neuroglycopaenia as a clinical manifestation of spontaneous hypoglycaemia.
(II) Failure to recognise that neuroglycopaenic symptoms may be non-specific. Acute and subacute neuroglycopaenia may only be confidently confirmed when Whipple's triad is fulfilled; namely neuroglycopaenic symptoms, a low blood glucose and symptoms relieved by raising blood glucose to or above normal.
(III) Failure to confirm or refute hypoglycaemia during symptoms.
(IV) Mislabelling healthy individuals as "hypoglycaemic" resulting in the "worried well syndrome".
(V) Inappropriate use of obsolete investigations, such as the prolonged oral glucose tolerance test.
(VI) Failure to provide hypoglycaemic samples in which to measure pancreatic hormones, counter-regulatory hormones and non-glucose substrates.
(VII) Measurement of pancreatic hormones, counter-regulatory hormones and non-glucose substrates in non-hypoglycaemic samples.
(VIII) Failure to recognise assay limitations, in particular immunoassays.
(IX) Failure to exclude factitious hypoglycaemia, autoimmune hypoglycaemia and non-insulinoma pancreatogenous hypoglycemia syndrome before diagnosing insulinoma.

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