

CASE

An 86-year-old, non-diabetic female presented with early morning spontaneous hypoglycaemia of two years' duration. She was found by her family confused and was only able to regain full consciousness after taking sweet beverages or nutritional drinks. Her documented capillary blood glucose levels during these episodes confirmed that she had hypoglycemia. She denied weight change and altered bowel habits. She had a strong family history of malignancy, wherein five of her eight children had colorectal carcinoma. Supervised fasting test showed low C-peptide, undetectable serum insulin and low blood ketone when the concurrent blood glucose level was 1.1 mmol/L. Following glucagon challenge, her blood glucose rose to 3.3 mmol/L. Sulphonylurea screen was negative. Serum IGF-2 was not tested due to unavailability. A diagnosis of NICTH was made. CECT thorax revealed a large left lower lobe lung tumour, measuring 11.5 x 8.9 x 12.9 cm, which partially encased the left main bronchus and descending thoracic aorta. Due to her advanced age, she refused biopsy and surgery. Her hypoglycaemia was treated with raw cornstarch therapy before bed and at 3 am, as well as oral prednisolone 5 mg daily.

CONCLUSION

The possibility of NICTH should be considered in the evaluation of spontaneous hypoglycemia in an elderly non-diabetic patient. Glucocorticoids can be effective in ameliorating hypoglycemia in this setting when surgery is not feasible.

EP_A074

**ENDOSCOPIC ULTRASOUND (EUS)
AND EUS GUIDED RADIOFREQUENCY
ABLATION (RFA) AS A DIAGNOSTIC
AND THERAPEUTIC INNOVATION FOR
INSULINOMA: A CASE REPORT**

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INTRODUCTION/BACKGROUND

Though rare in occurrence, insulinomas are the most common hormone-producing pancreatic neuroendocrine tumour (PNET) with a reported incidence of 4 cases per million per year. Surgical intervention has been the gold standard of treatment for insulinoma but an emerging

minimally-invasive method – endoscopic ultrasound (EUS) guided radio-frequency ablation (RFA) is increasing in use in the current management of insulinomas.

We present a case where EUS and EUS-guided RFA played a pivotal role in localising the lesion and serving as a therapeutic approach.

CASE

A 55-year-old female with underlying primary hypothyroidism, bronchial asthma, and class III obesity presented with refractory hypoglycaemia. Biochemical workup confirmed hyperinsulinaemic hypoglycaemia (plasma glucose 1.6 mmol/L, plasma insulin 107 pmol/L and serum c-peptide 1106 pmol/L). Initial imaging with computed tomography (CT) scan failed to localise any pancreatic lesion. Subsequent EUS discovered a hypochoic lesion at the pancreatic tail which was later histologically confirmed to be PNET. The patient was treated with subcutaneous octreotide and oral diazoxide, then underwent EUS-RFA rather than surgery due to high operative and anaesthetic risk. The procedure was uneventful however, she developed acute pancreatitis two weeks later. Following recovery from pancreatitis, she remained in euglycemic state for a few weeks before she developed a recurrence of hypoglycemia, albeit being less frequent and less severe (plasma glucose 1.9 mmol/L, plasma insulin 67.3 pmol/L and C peptide 1179 pmol/L). Repeat diagnostic and therapeutic EUS are planned for her.

CONCLUSION

EUS is a valuable tool as a diagnostic modality in localizing insulinoma. It can be an alternative therapeutic option to surgery, especially among high-risk patients.

EP_A075

**A RARE CASE OF HYPOVOLEMIC
HYPONATREMIA IN A PATIENT WITH
EXCESSIVE BILIARY TRACT LOSS**

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INTRODUCTION/BACKGROUND

Hyponatremia is the most common electrolyte abnormality observed among inpatients in the hospital setting. Severe hyponatremia (defined as serum sodium <125 mmol/L) is associated with significant morbidity and mortality. Hypovolemic hyponatremia occurs in the context of extracellular fluid depletion. Therefore, accurate diagnosis

and judicious fluid therapy are essential in managing patients with hypovolemic hyponatremia.

We report a case who developed severe hypovolemic hyponatremia following the insertion of a percutaneous transhepatic biliary drain for pancreatic head cancer.

CASE

A 66-year-old female with type-2 diabetes mellitus and hypertension was diagnosed with carcinoma of the head of the pancreas. The patient underwent percutaneous transhepatic biliary drainage (PTBD), which involved inserting a pigtail to facilitate biliary drainage. She presented with a 2-day history of altered behaviour and lethargy. Her Glasgow Coma Scale (GCS) was E4V3M5 and serum sodium level was 112 mmol/L. Prior to PTBD insertion, the patient had a baseline sodium level of 133 mmol/L. The patient's PTBD output ranged from 300 mL to 1400 mL daily. Furthermore, the patient's serum osmolarity was 252 mOsm/kg, her urine osmolarity was 331 mOsm/kg, and her urine sodium was 21 mmol/L, which indicated hypovolaemic hyponatremia. She was initially managed with isotonic fluid (NaCl 0.9%) replacement, and her serum sodium improved to 130 mmol/L. However, the patient's IVD regime was not adjusted to account for PTBD drain output, resulting in fluctuating serum sodium levels ranging from 107 to 119 mmol/L. The patient's bile fluid was sent for analysis, which revealed a sodium level of 119 mmol/L. She was restarted on IVD (NaCl 0.9%) for 4 pints to normalise her serum sodium level while waiting for surgery and oncology therapy.

CONCLUSION

Biliary tract loss is a rare cause of hypovolemic hyponatremia. It is important to recognize it in order to plan for appropriate fluid replacement.

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POSTPRANDIAL HYPOGLYCEMIA: A RARE PRESENTATION OF AN INSULINOMA

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INTRODUCTION/BACKGROUND

Insulinomas typically present with fasting hypoglycemia, owing to the autonomous secretion of insulin from this neuroendocrine tumor. A presenting complaint of

postprandial hypoglycemia in a patient with insulinoma is rare, with a slight male predominance.

CASE

A 66-year-old male with chronic kidney disease (stage G4A2) and interstitial lung disease presented to our centre with two episodes of post-prandial hypoglycaemia, resulting in loss of consciousness. The first occurred 2 hours after breakfast; the second, a month later, occurred 3 hours after breaking fast following a 14-hour fast during Ramadan. During the episode of postprandial hypoglycaemia, he fulfilled Whipple's triad with venous blood glucose 1.0 mmol/L, insulin 42.9 m IU/L and C-peptide 21.1 ng/mL. A 72-hour prolonged fast conducted and terminated at 42 hours revealed a nadir glucose of 2.5 mmol/L but low insulin of 2.0 m IU/L and elevated C-peptide 2.2 ng/mL. Peak ketone was 2.4 mmol/L, consistent with endogenous hyperinsulinism. A mixed meal test triggered hypoglycaemia of 2.3 mmol/L at 210 minutes, with insulin 25.5 m IU/L and C-peptide 17.2 ng/mL. Sulphonylurea screen and insulin autoantibodies were negative.

Both transabdominal and endoscopic ultrasounds revealed a 3.3 x 3.3 cm hyperechoic head of pancreas mass. A fine needle biopsy during EUS was done and immunohistochemistry of the specimen was positive for insulin and synaptophysin, consistent with insulinoma. The patient was started on diazoxide and put on a continuous glucose monitoring system. This also showed low glucose readings predominantly after meals. Unfortunately, he developed severe pneumonia and passed away prior to functional imaging and definitive surgery.

CONCLUSION

Kidney disease does elevate C-peptide levels, which may confound the evaluation of hypoglycemia. Clinicians should have a high index of suspicion for insulinoma, even in patients with a history of predominantly postprandial hypoglycaemia when confronted with high C-peptide levels in both fasting and postprandial states.