Adult E-Poster

EP_A115

PARANEOPLASTIC HYPOGLYCEMIA IN HEPATOCELLULAR CARCINOMA: A REPORT OF TWO CASES

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INTRODUCTION/BACKGROUND

Hepatocellular carcinoma (HCC) is the second most common cause of non-islet cell tumor hypoglycemia (NICTH), with a reported prevalence varying from 4% to 27%. It can also be an early presentation of HCC, even before the tumour is large enough to be detected on imaging. We report two cases of NICTH in patients with viral hepatitis-associated HCC.

CASE

Case 1: A 64-year-old male presented with severe hypoglycemia (glucose 1.8 mmol/L) during an admission for spontaneous bacterial peritonitis. He was newly diagnosed with Child-Pugh C liver disease from chronic hepatitis C. Hypoglycemia persisted despite resolution of sepsis, requiring continuous dextrose 50% infusion. Physical examination revealed a hard mass in the right upper quadrant. Laboratory findings included elevated AFP at >830 IU/mL, low albumin at 24 g/L, INR of 1.5, bilirubin of 25 μmol/L, and platelet count of 180 x10^9/L. CT imaging showed a cirrhotic liver with a segment II mass (4.2 x 4.0 x 4.0 cm). Laboratories done during hypoglycemia showed low levels of insulin at <0.5 mIU/L (normal 3–25), low C-peptide at 46 pmol/L (298–2350), low IGF-1 at 10.5 ng/mL (42–179), and HbA1c of <3.4% (Hb 9.6 g/dL). IGF-2 testing was unavailable.

Case 2: A 48-year-old female with chronic hepatitis B and a large HCC (14 x 10 x 9 cm) and elevated AFP at 8,925 IU/mL. She presented with symptomatic hypo-glycemia (glucose 2.5 mmol/L). Prolonged fasting revealed hypoglycemia at 4 hours (glucose 2.1 mmol/L), with insulin of <2 μIU/mL, C-peptide of <33 pmol/L, IGF-1 of 17 ng/mL (normal 90–249), and cortisol at 509 nmol/L. The presence of inappropriately low insulin and low c-peptide during an episode of hypoglycemia favors the diagnosis of NICTH.

Both cases were managed with oral prednisolone 1 mg/kg which allowed for successful weaning from dextrose. Despite transient stabilization, both patients succumbed within one month.

CONCLUSION

Paraneoplastic hypoglycemia should be considered in HCC patients with unexplained hypoglycemia. Early recognition and glucocorticoid therapy may improve short-term outcomes, though prognosis remains poor.

EP_A116

PSEUDOACROMEGALY: A CASE OF SEVERE INSULIN RESISTANCE WITH ACROMEGALIC FEATURES AND LOW IGF-1

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INTRODUCTION/BACKGROUND

Severe insulin resistance (SIR) is typically associated with well-established metabolic conditions such as central obesity, glucose intolerance, hypertension, dyslipidaemia and metabolic dysfunction-associated fatty liver disease (MAFLD). We present a case of SIR with prominent dermatologic and acral manifestations mimicking acromegaly, highlighting the importance of recognizing skin and soft tissue changes as possible indicators of underlying insulin resistance.

CASE

A 35-year-old male with a history of obesity (weight 128.7 kg, height 1.71 m, BMI 44 kg/m^2), hypertension (on amlodipine) and hyperlipidaemia (on atorvastatin) was referred for evaluation of hypokalemia (2.35 mmol/L). Clinical examination revealed acromegalic features, including macroglossia, rhinophyma, spade-like hands and marked dermatologic findings with acanthosis nigricans, pachyderma, multiple epidermoid cysts and dense axillary skin tags. Visual fields were normal. Anterior pituitary function was normal except for low IGF-1 at 78 ng/mL (normal: 88.3–246 ng/mL). Liver function tests revealed mild abnormalities of bilirubin (51 μmol/L), aspartate aminotransferase 71 U/L (normal: <32 U/L), alanine aminotransferase 23 U/L (normal: <33 U/L) and alkaline phosphatase 136 U/L (normal: 40–129 U/L). The patient denied alcohol use. Fasting insulin was 647 pmol/L (normal: 17.8-173 pmol/L). A diagnosis of pseudoacromegaly secondary to SIR was considered, supported by a significantly elevated HOMA-IR of 27.3 (normal: 0.5-1.4). HbA1c was 8.5%. He was initiated on metformin and lifestyle modification.

CONCLUSION
This case highlights a rare presentation of SIR with prominent dermatological manifestations mimicking acromegaly. This phenotype of insulin-mediated pseudo-acromegaly is thought to arise from a selective post-receptor insulin signaling defect, where metabolic pathways are impaired while mitogenic signaling remains relatively intact. Recognizing these atypical dermatologic clues is vital for early identification of insulin resistance syndromes, enabling timely diagnosis and appropriate intervention.

EP_A117

MASQUERADING INSULINOMA: A RARE CASE OF ENDOCRINE TUMOR AND COMPLEX CLINICAL PRESENTATION

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INTRODUCTION/BACKGROUND
Recurrent hypoglycemia poses a diagnostic challenge, particularly when multiple endocrine disorders are present. Adrenal insufficiency, characterized by deficient cortisol production, impairs glucose homeostasis by reducing gluconeogenesis and increasing insulin sensitivity. Insulinoma, a rare pancreatic β-cell tumor, causes unregulated insulin secretion, leading to symptomatic hypoglycemia. Diagnosis relies on Whipple's triad and specific biochemical markers, including elevated insulin, C-peptide, and proinsulin levels during fasting. The concurrent presence of insulinoma and adrenal insufficiency is rare and requires a high index of suspicion.

CASE
A 54-year-old male with type 2 diabetes (on metformin), obstructive sleep apnea, and a history of traditional medicine use presented with recurrent dizziness and documented hypoglycemia. Examination and electrolytes were unremarkable. A short Synacthen test showed an inadequate cortisol response, confirming adrenal insufficiency. He was started on oral hydrocortisone, with subsequent stabilization of glucose levels and was discharged.

Three months later, he presented again with symptomatic hypoglycemia (as low as 1.2 mmol/L) despite compliance with medications. Biochemical tests revealed elevated insulin (296 pmol/L) and C-peptide (2,595 pmol/L), suggesting endogenous hyperinsulinemia. A 72-hour fast confirmed persistent hypoglycemia with inappropriately high insulin and C-peptide levels. CT imaging showed a distal pancreatic lesion consistent with insulinoma and he then underwent distal pancreatectomy. Hypoglycemia resolved after surgery. He remains stable on hydrocortisone (10 mg three times daily).

Cortisol deficiency initially explained the patient's hypoglycemia, which improved with steroid therapy. However, persistent episodes prompted further workup, revealing an insulinoma. Surgical removal resulted in resolution, confirming the dual etiology of his hypoglycemia.

CONCLUSION
This case highlights the rare coexistence of insulinoma and adrenal insufficiency. Cortisol deficiency can obscure insulinoma symptoms, emphasizing the need for a thorough and systematic diagnostic approach to recurrent hypoglycemia.

EP_A118

GROWTH RETARDATION THERAPY IN PATIENTS WITH MARFAN SYNDROME: A CASE REPORT AND LITERATURE REVIEW

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INTRODUCTION/BACKGROUND
Marfan syndrome is an autosomal dominant disorder affecting connective tissues, with an incidence of 2-3 per 100,000 individuals. It involves mutations of the gene coding for fibrillin-1, and is characterized by ocular, cardiovascular, and skeletal manifestations. Excessive linear growth and tall stature are common features, which may lead to aortic dilatation, scoliosis, and social adjustment problems. Hence, height control treatment is considered in some patients.

CASE
We report the case of a 15-year-old male who was referred to the Endocrine clinic for possible growth-reductive therapy. His height was 198 cm (97th percentile) and his weight was 69.5 kg (50th percentile). He experienced rapid growth starting at age 7; however, he did not receive any treatment for height reduction. Physical examination revealed a high-arched palate, a systolic murmur at the mitral area, arachnodactyly, and mild upper thoracic scoliosis. An echocardiogram showed mild dilation of the left atrium and left ventricle, mild to moderate mitral regurgitation, and mitral valve prolapse. His aortic root was not dilated.

He maintains a normal social life, although he occasionally feels excluded due to limitations on physical activities resulting from loose ligaments. A review of available