to avoid unnecessary investigations and treatments. The somatostatin test can be useful and practical in differentiating TSHoma from resistance to thyroid hormone.

EP_A068

LATENT AUTOIMMUNE DIABETES IN YOUTH PRESENTING AS YOUNG-ONSET TYPE 2 DIABETES: A CASE REPORT

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INTRODUCTION/BACKGROUND
Latent autoimmune diabetes forms a continuous age-related spectrum from LADY to LADA, where LADY exhibits greater autoimmunity. Latent autoimmune diabetes in youth (LADY) is diagnosed in individuals aged 15 to 29 years. A high prevalence of LADY is observed among youth with the T2DM phenotype. The TCF7L2 rs12255372 polymorphism is linked to an increased risk of developing T2DM at a young age and is associated with lower levels of GADA in individuals with either T2DM or latent autoimmune diabetes.

CASE
A 28-year-old female with no history of T2DM was admitted to the emergency room due to altered mental status. She had experienced a weight loss of approximately 10 kg and frequent nocturnal urination; however, she had never consulted a physician. Both her parents and her sister have a known history of T2DM. A physical examination revealed excess body weight and acanthosis nigricans. Laboratory results indicated elevated glucose levels, a high A1C level, a normal fasting C-peptide, negative ketones in the urine and a high HOMA-IR score. Following the patient's clinical improvement, we transitioned from insulin to oral hypoglycemic drugs. After several weeks, we identified a positive anti-GAD result and the TCF7L2 gene polymorphism, rs12255372 (G/T).

CONCLUSION
The clinical diagnosis of latent autoimmune diabetes (LAD) can be quite challenging. Young individuals exhibiting a T2DM phenotype should undergo assessment for pancreatic islet cell autoantibodies. Common TCF7L2 gene polymorphisms are linked to T2DM and latent autoimmune diabetes but not type 1 diabetes.

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SUSPECTED LEFT ADRENOCORTICAL CARCINOMA LATER DIAGNOSED AS EXTRA-ADRENAL COMBINED SCHWANNOMA AND GANGLIONEUROMA

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INTRODUCTION/BACKGROUND
Ganglioneuromas and schwannomas are both rare benign tumours. They arise from different types of nerve cells: ganglioneuromas from autonomic ganglion cells and schwannomas from nerve sheath cells (Schwann cells). A combined adrenal ganglioneuroma and schwannoma is extremely rare, representing 1.4% of adrenal incidentalomas.

CASE
We present a 41-year-old male with an underlying left ureteric calculus who was referred for left adrenal incidentaloma from CT urography (CTU). He had no history of paroxysms of headache, sweating or palpitations. There were no symptoms to suggest Cushing's or underlying malignancy. On examination, he was normotensive and there were no discriminatory features of Cushing's. Laboratory evaluation showed normal potassium (4.3 mmol/L), and the overnight dexamethasone test (ODST) was appropriately suppressed (12 nmol/L). 24-hour urine metanephrine was within normal range. Testosterone and DHEAS were within the normal range with 19 nmol/L and 3.830 umol/L levels, respectively. Initial CTU reported a left adrenal mass measuring 4.0 x 3.1 x 3.8 cm. The adrenal CT demonstrated a left adrenal mass measuring 4.1 x 3.2 x 4.0 cm, with a 39 Hounsfield unit, an absolute washout of 28% and a relative washout of 16%. These findings indicate an indeterminate adrenal mass with a differential of adrenocortical carcinoma or pheochromocytoma. He underwent a left adrenalectomy and was discharged well. Histopathological examination showed an encapsulated biphasic tumour. There were Verocay bodies, and the neoplastic cells were narrow, elongated and wavy with tapered ends, interspersed with collagen fibres, which are distinct characteristics of schwannomas. At the periphery of the tumour, a separate proliferation of spindle cells

with multiple ganglion cells was seen, indicative of ganglioneuromas. Sections of the adrenal gland show an uninvolved cortex and medulla.

CONCLUSION

In our case, ganglioneuromas may have arisen from the paravertebral sympathetic plexus located retroperitoneally. This rare condition may mimic adrenal malignancy radiologically, and the modality of treatment is surgical excision.

EP_A070

A CASE REPORT OF THYROTOXIC PERIODIC PARALYSIS: AN ENDOCRINE EMERGENCY CAUSE OF PARAPARESIS IN YOUNG ADULTS AND ITS REVIEW OF PATHOPHYSIOLOGY

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INTRODUCTION/BACKGROUND

Thyrotoxic periodic paralysis (TPP) is a potentially life-threatening clinical manifestation of thyrotoxicosis predominantly seen in those of Asian descent between the ages of 20 and 40 years. The attack is characterised by acute and reversible severe muscle weakness with hypokalemia that resolves with the treatment of hyperthyroidism.

CASE

A 22-year-old Chinese male with no previous medical illness presented to the emergency department with sudden onset bilateral lower limb weakness associated with intermittent palpitations for the past month. Lower limbs neurological examination revealed proximal muscle weakness but preserved tone, reflexes and sensation. There was a small diffuse goitre and fine tremors on the bilateral hands. He did not have features of thyroid eye disease or a thyroid bruit. Additionally, he denied any family history of thyroid disorders. Electrocardiogram showed sinus tachycardia, flattened T-waves and generalised U-waves. Laboratory assessments showed severe hypokalemia with a serum potassium level of less than 1.5 mmol/L (3.4-4.5). He was given intravenous potassium correction (KCl) twice (4 g in total) and 4 pints maintenance drips at 1.5g KCl per pint. Thyroid function tests and TSH receptor antibodies were suggestive of Graves' Disease. He was discharged home with carbimazole and propranolol and remains well after discharge.

CONCLUSION

Thyrotoxic periodic paralysis should be considered in the differential diagnosis of neuromuscular weakness in the context of hypokalaemia by the treating physicians. In TPP, hypokalaemia results from an intracellular shift of potassium induced by thyroid hormone sensitisation of the Na+/K+–ATPase pump, triggering muscle weakness and paralysis. The importance of prompt recognition, early diagnosis and treatment of the condition can prevent severe complications, such as cardiac dysrhythmia and respiratory failure. The addition of non-selective beta-blockers, such as propranolol, is utilised to treat and prevent paralytic attacks by mitigating hyperadrenergic activity and improving hypokalaemia.

EP_A071

A CASE REPORT AND LITERATURE REVIEW OF SUBCUTANEOUS LEVOTHYROXINE ABSORPTION TESTING IN A PATIENT WITH REFRACTORY PRIMARY HYPOTHYROIDISM

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INTRODUCTION/BACKGROUND

We present a case of refractory primary hypothyroidism in which the patient failed an oral levothyroxine (LT4) absorption test under optimised conditions. Given limited formulary options and the patient's complex clinical background, an off-label trial of subcutaneous LT4 was initiated as an alternative treatment strategy.

CASE

A 51-year-old male underwent total thyroidectomy with right central neck dissection and radioactive iodine ablation for papillary thyroid carcinoma. He was maintained on a supraphysiologic dose of oral LT4 (approximately 3.16 mcg/kg/day) with suppressed TSH 0.24 mIU/L and fT4 20.6 pmol/L. He was admitted for encapsulating sclerosing peritonitis, requiring two paracentesis, diagnostic laparoscopy, intravenous antibiotics and systemic corticosteroids. During admission, thyroid function progressively worsened (TSH >100 mIU/L and fT4 9.7 pmol/L) despite adherence to increasing oral LT4 doses. An oral LT4 absorption test confirmed malabsorption. Given his ischemic heart disease, weekly high-dose intravenous or intramuscular LT4