Adult E-Poster

CONCLUSION
Failure to recognize euglycemic DKA may lead to catastrophic outcomes. Clinicians must maintain a high index of suspicion in high-risk populations and advocate for ketone testing in unexplained metabolic acidosis, regardless of glucose levels. Early recognition and targeted therapy can rapidly reverse acidosis and prevent morbidity.

EP_A016

CUSHING'S DISEASE AND THE COST OF DELAY: FROM METABOLIC TO SKELETAL FRAGILITY

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INTRODUCTION/BACKGROUND
Cushing's disease, caused by an ACTH-secreting pituitary adenoma, can lead to profound metabolic disturbances, including insulin resistance, hypertension, osteoporosis, and an increased risk of fractures. Timely intervention is crucial to prevent long-term complications. Surgical removal of the pituitary adenoma via transsphenoidal surgery remains the gold standard treatment, offering potential for disease remission and metabolic recovery.

CASE
A 39-year-old female was initially investigated at age 34 for young-onset hypertension, recurrent hypokalaemia, and diabetes mellitus. Despite the absence of classical Cushingoid features, biochemical evaluation revealed persistent hypercortisolism, with an unsuppressed overnight dexamethasone suppression test (ONDST 565 nmol/L), low-dose dexamethasone suppression test (607 nmol/L), and markedly elevated 24-hour urinary cortisol (1401 nmol/L). Adrenocorticotrophic hormone (ACTH) levels were elevated (5.4 pmol/L), and a cortisol day curve confirmed the loss of cortisol and ACTH diurnal rhythm. Magnetic resonance imaging identified a left pituitary microadenoma (5.9 × 6.5 mm). However, the patient was lost to follow-up and was only reinvestigated after sustaining a T10 compression fracture from a trivial fall. Repeat biochemical testing reaffirmed hypercortisolism (ODST: 750 nmol/L, 24-hour urinary cortisol: 1544 nmol/L, ACTH: 9.7 pmol/L). Magnetic resonance imaging showed a stable pituitary lesion (6.2 × 4.0 mm), and inferior petrosal sinus sampling confirmed a pituitary source of ACTH hypersecretion, with post-DDAVP central-to-peripheral ACTH ratios >3. Ketoconazole was initiated (titrated to 400 mg BD) for biochemical control. She successfully underwent endoscopic transsphenoidal surgery with adenomectomy and hypophysectomy in October 2024. Postoperatively, she achieved remission but developed panhypopituitarism, necessitating hormone replacement with hydrocortisone, L-thyroxine, and estradiol (Progyluton). Remarkably, she no longer required diabetes treatment, and her hypertension improved, requiring only a single antihypertensive agent.

CONCLUSION
This case highlights the challenges of diagnosing Cushing's disease in the absence of overt clinical features, the devastating skeletal consequences of delayed treatment, and the transformative impact of successful surgical intervention. Early recognition, multidisciplinary management, and timely surgical intervention remain paramount in optimizing patient outcomes.

EP_A017

AN UNUSUAL SITE OF ADRENOCORTICAL CARCINOMA

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INTRODUCTION/BACKGROUND
Adrenocortical carcinoma (ACC) is a rare malignancy with an incidence of 0.5–2 cases per million per year. Typically, ACC originates in the adrenal glands. Although exceedingly rare, ectopic presentations can occur due to developmental anomalies and rarely may arise from an adrenal rest. These adrenal rests are usually clinically silent, but on rare occasions, may undergo malignant transformation and hormonal secretion.

CASE
We report the case of a 33-year-old female with underlying hypertension and diabetes who had an incidentally discovered right adnexal mass which was asymptomatic during a routine medical checkup. She underwent complete laparoscopic tumour resection without complications. Comprehensive histopathologic evaluation revealed a low-grade ectopic ACC arising from an adrenal rest. Postoperative imaging demonstrated no residual tumor and normal adrenal glands. She remains under active surveillance.

The case highlights the diagnostic challenge posed by an ectopic ACC masquerading as an adnexal mass. Detailed histopathologic and immunohistochemical analyses are

essential in accurately determining tumor origin, thus guiding optimal management strategies. Adrenal rests have been described within the retroperitoneum, broad ligament, testis, ovaries and inguinal region. Due to limited data, the management of ectopic ACC is generally considered similar to that of eutopic tumors. Complete surgical resection is still the mainstay of treatment for both eutopic and ectopic ACC. Long-term follow-up and close monitoring are imperative given the risk of recurrence.

CONCLUSION

This case underscores the importance of maintaining a high index of suspicion, as many ectopic adrenocortical rests are under-recognized due to their small size and low clinical relevance. Awareness of ectopic adrenal rests is crucial to correctly identify sources of adrenocortical hormone production, avoid misinterpretations in the diagnostic workup of intraabdominal masses, and to evaluate for possible malignant transformation.

EP_A018

SUCCESSFUL THYROIDECTOMY IN SEVERE GRAVES' DISEASE: A MODIFIED BLOCK-AND-REPLACE APPROACH

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INTRODUCTION/BACKGROUND

Graves' disease is the most common cause of autoimmune hyperthyroidism. In severe cases, thyroidectomy is required. The block-and-replace regimen helps achieve euthyroidism preoperatively, but perioperative thyroid instability remains a challenge, particularly in urgent surgical settings.

CASE

A 20-year-old Malay female with severe plaque psoriasis developed a painful goiter and severe thyrotoxicosis following Guselkumab treatment, necessitating carbimazole 30 mg daily. She was initially scheduled for radioactive iodine (RAI) therapy; however, two weeks after her fourth Guselkumab dose, just before her planned RAI, she had thyroid storm. Emergency management included Lugol's iodine, high-dose propylthiouracil, corticosteroids, and cholestyramine. Due to recent iodine exposure, RAI was no longer a viable option, necessitating an alternative definitive treatment approach.

Methimazole was increased from 20 mg to 25 mg twice daily, successfully lowering free T4 from 27 to 17 pmol/L. However, on the day before her scheduled thyroidectomy, severe hypothyroidism (TSH <0.01 mIU/L, T4 <5 pmol/L) was noted. To rapidly restore euthyroidism, she received a total of 300 mcg of levothyroxine overnight while continuing methimazole. This intervention raised her T4 to 8.3 pmol/L, ensuring safe surgical conditions while mitigating the risk of recurrent thyroid storm in this difficult-to-control case.

CONCLUSION

This case highlights the challenges of perioperative thyroid management in Graves' disease. High-dose levothyroxine while maintaining methimazole facilitated urgent surgical clearance, balancing the risks of hypothyroidism and thyroid storm. This modified block-and-replace approach may be considered in select cases requiring time-sensitive surgical intervention.

EP_A019

HYPORENINAEMIC HYPOALDOSTERONISM (HH) AS THE CAUSE OF UNEXPLAINED HYPERKALAEMIA

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INTRODUCTION

Hyporeninaemic hypoaldosteronism (HH) is a frequently overlooked cause of hyperkalaemia. In HH, juxtaglomerular apparatus dysfunction secondary to diabetes, chronic kidney disease and medications like NSAIDs, ACEI, and heparin leads to reduced renin secretion, thus decreasing aldosterone synthesis, resulting to impaired potassium excretion and H^+ secretion. Hyperkalaemia and metabolic acidosis ensue respectively with no adrenal insufficiency.

CASE

A 57-year-old female presented with persistent and asymptomatic hyperkalaemia for a year at primary care. Hemolysis was ruled out. Electrocardiogram findings remained normal throughout. She had type 2 diabetes mellitus for 15 years, hypertension and stage 2 chronic kidney disease (CKD) (eGFR ~62 mL/min/1.73 m^2) for 2 years. Diabetes was moderately controlled with metformin. Hypertension was treated with amlodipine. Additionally, she had been using NSAIDs intermittently for back pain over the last three years. Due to the presence of hyperkalaemia despite the fairly normal renal function,