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,

Adult E-Poster

she was referred to an endocrinologist. Further evaluation included a morning serum cortisol level at 9 am, which was normal, ruling out adrenal insufficiency. However, serum aldosterone was low with inappropriately low renin levels despite elevated potassium. Mild metabolic acidosis was present. These findings strongly suggested a diagnosis of HH. The patient was managed through dietary potassium restriction, discontinuation of NSAIDs, initiation of fludrocortisone for potassium excretion, and sodium bicarbonate to correct the metabolic acidosis with a close watch on renal function and potassium levels. Within two weeks, her potassium levels normalized and remained stable thereafter. Hyperkalaemia was ultimately attributed to HH, likely caused by a combination of chronic diabetes with CKD and the use of NSAIDs, all leading to juxtaglomerular apparatus dysfunction.

CONCLUSION

This case highlights the importance of considering HH in persons with diabetes or CKD with unexplained hyperkalaemia despite a normal or mildly impaired renal function and initiating the appropriate management to prevent potentially life-threatening arrhythmias.

EP_A020

THYROTOXICOSIS WITH DISCORDANT THYROID FUNCTION TESTS: A RARE PITUITARY TUMOR PRESENTING WITH THYROTOXIC CARDIOMYOPATHY

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INTRODUCTION

Thyrotoxicosis can lead to life-threatening complications, including thyroid storm and thyrotoxic cardiomyopathy. Discordant thyroid function tests (TFTs) in severe thyrotoxicosis raise suspicion for atypical causes such as assay interference, pituitary pathology, or ectopic thyrotropin (TSH) secretion.

CASE

A 29-year-old male presented with a two-week history of cough, dyspnea, and palpitations. On admission, he was hemodynamically stable but had bibasal fine crepitations, bilateral pedal edema and signs of thyrotoxicosis (agitation, fine tremors, and hyperreflexia). Cardiac monitoring revealed atrial fibrillation with a heart rate >150 bpm. Thyroid function tests showed discordant TSH 14.92 Miu/L, T4 65.9 pmol/L and T3 13.47 pmol/L levels. He was treated as a case of thyroid storm with thyrotoxic cardiomyopathy.

Echocardiography confirmed heart failure with reduced ejection fraction (20%) and pulmonary artery systolic pressure of 48 mm Hg. Further workup ruled out Group 2, 3, 4 Pulmonary Hypertension (PH) and no invasive right heart catheterization was done. Assay interference was excluded, thyroid autoantibodies were negative and other pituitary hormones were normal. Pituitary MRI showed a large pituitary mass, raising suspicion for the presence of a TSH-secreting pituitary adenoma.

He is currently managed with the anti-thyroid drug methimazole, anti-heart failure medications and anticoagulation by a multidisciplinary team.

TSH-secreting pituitary adenomas (TSHomas) are rare, causing autonomous TSH secretion unresponsive to negative feedback. Unlike resistance to thyroid hormone (RTH), TSHomas typically present with overt hyperthyroidism and tumor-related symptoms (visual defects, headaches, anterior pituitary dysfunction). Atrial fibrillation and heart failure are rare in TSHomas but were prominent in this case. Transsphenoidal surgery is the preferred treatment, resulting to thyroid function normalization in 80% of cases. However, TSHomas often exhibit aggressive invasion, affecting surgical success. If surgery fails, somatostatin analogs (SSAs) can normalize TSH and reduce tumor size.

CONCLUSION

This case highlights the need to consider causes of atypical thyrotoxicosis when TFTs are discordant. Early recognition and a multidisciplinary approach are crucial for managing thyrotoxic cardiomyopathy and its underlying etiology.

EP_A021

ADULT LANGERHANS CELL HISTIOCYTOSIS WITH MULTISYSTEM INVOLVEMENT

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INTRODUCTION/BACKGROUND

Langerhans cell histiocytosis (LCH) is a rare, heterogenous disease with a wide range of manifestations, from unifocal lesions to multisystem involvement. Commonly affected