CASE

A 44-year-old male with chronic alcohol use presented with epistaxis. On examination, he was deeply jaundiced and had tremors on outstretched hands. Initial investigations showed severe hepatitis with AST 2029 U/L, ALT 698 U/L, total bilirubin 236 µmol/L, alkaline phosphatase 138 U/L, and thrombocytopenia (34 $\times 10^9$/L). Viral hepatitis HBV, HCV, HIV, and autoimmune hepatitis screen were negative. Dengue IgM was positive.

Thyroid function tests demonstrated overt thyrotoxicosis with free thyroxine 4 (FT4) 58.6 pmol/L and suppressed thyroid-stimulating hormone.

He was managed as severe thyrotoxicosis with impending thyroid crisis in view of systemic illness and multiorgan involvement. Due to significant hepatic dysfunction, he was treated with propranolol, dexamethasone, and lithium carbonate 300 mg BD. Over 5 days, there was marked clinical improvement with resolution of tachycardia and tremors. FT4 decreased to 44.8 pmol/L. Liver function tests improved significantly (AST 157 U/L, ALT 195 U/L, bilirubin 163 µmol/L), and thrombocytopenia resolved (platelets 323 $\times 10^9$/L). He remained hemodynamically stable with normal Glasgow Coma Scale throughout admission.

CONCLUSION

This case highlights severe thyrotoxicosis with acute hepatitis and dengue infection, where management was complicated by contraindication to conventional antithyroid therapy. Lithium and corticosteroids provided effective biochemical and clinical improvement. Early recognition and individualized therapy are crucial in complex multisystem thyrotoxic presentations.

EP_A168

PRESENCE OF MACRO-TSH: A RARE MIMICKER OF SUBCLINICAL HYPOTHYROIDISM

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INTRODUCTION

Macro-thyroid-stimulating hormone (macro-TSH) is a rare complex formed by monomeric TSH with anti-TSH autoantibodies. Macromolecules of TSH are not renally excreted due to its large size, leading to elevated TSH measurements without clinical consequences. This rare condition frequently mimics subclinical hypothyroidism, often leading to misdiagnosis and inappropriate levothyroxine therapy.

CASE

A 17-year-old female with major depressive disorder was biochemically diagnosed with subclinical hypothyroidism (TSH 39.06 mIU/L, free thyroxine 4 12.9 pmol/L, anti-thyroid peroxidase negative) and commenced on levothyroxine. Over 5 years, her TSH levels heavily fluctuated (0.48–82.59 mIU/L) and remained persistently elevated with high-normal free T4 levels despite treatment adherence. An endocrinology consult was obtained, and clinical evaluation revealed a clinically asymptomatic and euthyroid patient, with no family history of thyroid disease or supplement use, and there was no goiter. Assay interference was excluded by analyzing her thyroid function tests on a different platform, which yielded similar biochemical results. Subsequently, a polyethylene glycol (PEG) precipitation test was performed. Her pre-PEG TSH of 29.24 mIU/L decreased significantly to 2.78 mIU/L post-PEG. This yielded a remarkably low TSH recovery rate of 9.5%, strongly indicating the presence of macro-TSH. Levothyroxine was then stopped, and she remained clinically euthyroid.

CONCLUSION

While gel filtration chromatography remains the gold standard for diagnosing this condition, PEG precipitation is a more accessible, cost-effective, and reliable screening method in clinical practice. A TSH recovery rate below 20% is considered highly suggestive of macro-TSH. Clinicians

should maintain a high index of suspicion for macro-TSH in asymptomatic patients presenting with isolated TSH elevations that do not respond to thyroxine therapy. Prompt recognition prevents misdiagnosis and avoids the potential risks of unnecessary thyroid hormone replacement.

EP_A169

OVERT HYPOTHYROIDISM PRESENTING WITH ISOLATED LOWER MOTOR NEURON FACIAL NERVE PALSY

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INTRODUCTION
Cranial nerve palsies have been reported in patients with uncontrolled hypothyroidism. We describe a case of overt hypothyroidism due to treatment disruption following radioiodine therapy, presented with a unilateral lower motor neuron seventh cranial nerve palsy.

CASE
A 32-year-old female presented with hypertension, dyslipidemia, class III obesity, and Graves' disease post radioiodine therapy. She had stable thyroid function test with levothyroxine replacement post radioiodine. She presented with a 3-day history of right-sided facial droop associated with lethargy, weight gain, and constipation. She reported inadequate levothyroxine supply due to 2-month lapses in follow-up.

On examination, there was a right-sided lower motor neuron 7th cranial nerve palsy with delayed ankle reflexes. No additional neurological deficits, goiter, cutaneous rashes, or vesicular lesions were noted. There was no preceding viral illness or otologic symptoms.

Thyroid function tests showed overt hypothyroidism with thyroid-stimulating hormone 38 mIU/L, free thyroxine <5.4 pmol/L with a deranged lipid profile (total cholesterol: 8.8 mmol/L, low-density lipoprotein: 5.72 mmol/L, triglyceride: 1.77 mmol/L). Renal and liver function tests were within normal limits, with no leukocytosis. Neuroimaging of the brain was unremarkable.

She was commenced on a short course of high-dose prednisolone, with no improvement in symptoms. Levothyroxine replacement therapy initiated led to progressive restoration of thyroid function, accompanied by symptom recovery.

CONCLUSION
Isolated lower motor 7th nerve palsy has been reported as a manifestation of hypothyroidism. This case underscores the importance of early recognition to enable timely and appropriate management, as patients with hypothyroidism-induced isolated seventh nerve palsy demonstrate marked recovery with adequate levothyroxine replacement.

EP_A170

FIRE IN THE GLAND: A RARE CASE OF GRAVES' DISEASE IN CYSTIC FIBROSIS

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INTRODUCTION
Cystic fibrosis (CF) is an autosomal recessive disorder caused by mutations in the CFTR gene. Complications such as cystic fibrosis–related diabetes (CFRD) are well recognized. The association between CF and autoimmune thyroid disease, however, is rare and poorly understood. We report a case of CFRD complicated by Graves' disease.

CASE
A 22-year-old male was diagnosed with CF at age 5, confirmed by a positive sweat chloride test. Following the diagnosis, lifelong pancreatic enzyme replacement therapy (Creon) was initiated to treat exocrine pancreatic insufficiency. In 2021, he developed type 3c diabetes, attributed to endocrine pancreatic insufficiency, and required regular basal insulin therapy.

In early 2024, he developed hypokalemic periodic paralysis with proximal myopathy, despite potassium correction, and was admitted to the hospital. On admission, examination revealed a fine tremor and diffuse bilateral neck swelling. Biochemical evaluation showed thyrotoxicosis with Free T4 of 37 pmol/L and thyroid-stimulating hormone (TSH) <0.01 mIU/L. He started a tapering dose of carbimazole and propranolol. An urgent neck ultrasound showed a heterogeneous thyroid parenchyma with increased vascularity and no nodules. Elevated anti-thyroid peroxidase (anti-thyroid peroxidase, >600 IU/mL) and TSH receptor antibodies (thyrotropin receptor antibody, 2.57 IU/L) confirmed a diagnosis of Graves' disease.