Besides host factor, interferon previously used as a standard treatment in HCV, is known to cause thyroid dysfunction either by direct inhibitory effect on the thyroid gland or immune activation particularly in those with genetic predisposition to autoimmune disease

Direct-acting Antivirals (DAA) targeting specific non-structural proteins of the virus, hinders viral replication. Since it was introduced, there are few studies demonstrating the effect of DAA on thyroid dysfunction.

We report a case of new-onset hypothyroidism in a patient with HCV soon after commencement of DAA.

CASE

A 53-year-old male, former intravenous drug user with Chronic Hepatitis C Child Pugh A, was treated with DAAs (sofosbuvir and daclatasvir) and ribavirin based on viral load and genotyping. He denied preceding hypothyroid symptoms or family history of thyroid disorder. Two months into treatment, he complained of facial puffiness, weight gain and was eventually admitted for heart failure. Biochemical investigations revealed overt hypothyroidism with FT4 <3.2 pmol/L (7.86 - 14.41) and TSH >300 uIU/mL (0.38 - 5.33) with positive thyroid peroxidase antibody. Levothyroxine was started subsequently, however due to poor compliance, he showed poor clinical and biochemical response in HCV viral suppression and thyroid disorder.

CONCLUSION

Hypothyroidism related to HCV infection is a relatively uncommon association but an important one to diagnose, nonetheless. The condition can be part of the extrahepatic viral manifestation or may be treatment related. Supported by previous study that demonstrated similar effect of DAA on the thyroid gland, further larger RCTs are needed to substantiate this association.

EP_A184

CHALLENGES IN THE DIAGNOSIS AND DIFFERENTIATION OF THYROID HORMONE RESISTANCE FROM TSHOMA

https://doi.org/10.15605/jafes.039.S1.195

Shu Xian Lai and Eunice Yi Chwen Lau
Endocrine Unit, Department of Medicine, Sibu Hospital, Sarawak, Malasyia

INTRODUCTION

An elevated fT4 with non-suppressed TSH levels may present as a diagnostic challenge resulting in inappropriate treatment. Although rare, resistance to thyroid hormone (RTH) and TSHomas can present in this manner and diagnosis is important to guide management.

CASE

A 43-year-old male was referred from a district hospital for evaluation of atypical chest pain. He was noted to have an elevated fT4 with normal TSH for the past four years and had received carbimazole previously. He reported symptoms of hyperthyroidism including intermittent palpitations, tremor and anxiety. No goitre was noted clinically. Both his mother and maternal aunt had undergone thyroid surgery. After stopping treatment, he had elevated fT4 (28.31 and 19.39 pmol/L) and normal TSH (1.55 and 1.619 m IU/L) performed on two different platforms. Sex hormone binding globulin (22.6 nmol/L), alpha-subunit (0.22 IU/L) and neck ultrasound were normal. Pituitary MRI showed an ill-defined hypo-enhancing nodule measuring 2.0 mm x 2.2 mm x 1.9 mm. Other pituitary hormones were unremarkable. He went on to have a thyrotropin stimulation test which showed an exaggerated TSH response with an 11-fold increase at 20 minutes, supporting the diagnosis of RTH. Genetic testing was not performed due to resource limitations. Subsequently, he was managed symptomatically with beta blockers.

CONCLUSION

When managing discordant thyroid function tests, a high index of suspicion and proper clinical assessment, including laboratory and imaging studies, are needed to ensure precise diagnosis and avoid potentially harmful or unnecessary treatment such as radioactive iodine, anti-thyroid medication or pituitary surgery. Small non-functioning pituitary adenomas are not uncommon. Abnormal imaging needs to be correlated carefully.

EP_A185

UNVEILING PRETIBIAL MYXEDEMA: A CASE REPORT OF GRAVES' DISEASE

https://doi.org/10.15605/jafes.039.S1.196

Uswaton Hasanah Hashim, Jen Hoong Oon, Noor Lita Adam
Department of Medicine, Hospital Tuanku Ja'afar, Seremban, Negeri Sembilan, Malaysia

INTRODUCTION

Pretibial myxedema (PTM), a rare manifestation of Graves' disease, holds importance as it constitutes a component of the classical triad associated with the condition. Historically observed in up to 5% of Graves' disease patients, the incidence of pretibial myxedema has notably decreased, likely attributed to advancements in early diagnosis and prompt initiation of antithyroid therapy.

We present a rare case of biopsy-proven pretibial myxedema in Graves' disease. We reviewed case notes, investigation results, imaging studies and discussed prevalence based on published reports.

CASE

A 39-year-old Chinese male presented with significant weight loss, neck swelling and bilateral lower limb nodular skin lesions. Clinical examination revealed diffuse goiter and bilateral anterior shin swelling. Thyroid imaging showed features consistent with thyroiditis, while bilateral anterior shin lesions indicated pretibial myxedema. Biochemical analysis revealed elevated thyroid function tests and positive thyroid-stimulating hormone antibody levels (>40 IU/L). A skin biopsy confirmed dermal mucinosis consistent with myxedema. Antithyroid medications were initiated. The patient expressed willingness to undergo radioactive iodine treatment if remission is not achieved.

CONCLUSION

Global reported cases of PTM are scarce. In China, a retrospective study revealed a prevalence of 1.6% within thyroid disorders, notably 1.7% in thyrotoxicosis and 0.36% in other thyroid conditions. In Malaysia, reported cases of PTM are minimal. PTM typically coexists with ophthalmopathy, mainly affecting the pretibial region. Pathologically, it results from glycosaminoglycan accumulation triggered by circulating thyrotropin-receptor antibodies, akin to thyroid ophthalmopathy.

In summary, PTM is a rare autoimmune manifestation of Graves' disease, commonly associated with ophthalmopathy and localized to the pretibial region. Clinical diagnosis is typically straightforward, often obviating the need for biopsy, particularly when Graves' disease is active.

EP_A186

CARBIMAZOLE-INDUCED AGRANULOCYTOSIS WITH CONCURRENT SCRUB TYPHUS

https://doi.org/10.15605/jafes.039.S1.197

Jen Hoong Oon, Afifah Kamarudin, Nurul Thohirah Ahmad, Lit Sin Yong

Department of Medicine, Hospital Tuanku Ja'afar Seremban, Malaysia

INTRODUCTION

While carbimazole is an effective treatment for hyperthyroidism, it carries a risk of agranulocytosis. Concurrently, rickettsial infections like scrub typhus can worsen neutropenia. We reviewed case notes, investigation results, imaging studies and treatment options based on a literature review.

CASE

A 55-year-old male farmer with hyperthyroidism on high-dose carbimazole treatment sustained a machete injury to his left middle finger. Upon presentation, he had fever, normal thyroid function, stable hemodynamics, severe neutropenia (total white count 0.4 × 10^9/L, absolute neutrophil count 0.02 × 103/μL) and typhus eschars. He was treated with doxycycline, piperacillin-tazobactam and subcutaneous granulocyte-colony stimulating factor (G-CSF). Abnormal thyroid function (FT4 46 pmol/L and TSH <0.01 m IU/L) and elevated C-reactive protein (234 mg/L) were also observed. Carbimazole was discontinued and replaced with oral cholestyramine and lithium. Positive serologic findings confirmed scrub typhus. With targeted treatment and G-CSF support, the patient's condition improved, as evidenced by normalized blood counts. Radioactive iodine therapy was contemplated once thyroid function was controlled.

CONCLUSION

Carbimazole carries the risk of severe adverse effects, including agranulocytosis. This risk may be compounded with a concurrent rickettsial infection, which can also cause neutropenia. Diagnosis relies on clinical suspicion and profound neutropenia, requiring thorough evaluation including serological tests and PCR to differentiate between agranulocytosis-related and rickettsial infections. Immediate discontinuation of carbimazole and replacement with alternative antithyroid drugs is necessary, often supplemented with broad-spectrum antibiotics and G-CSF to prevent overwhelming infection risks. Tailored antibiotic therapy should also be administered for the rickettsial infection. Prompt recognition and intervention are crucial, particularly in endemic areas. Early diagnosis and aggressive management can help mitigate morbidity and mortality. Educating patients on symptom recognition remains the most effective preventive measure.

EP_A187

"SWINGING HEART" IN A SEVERELY HYPOTHYROID PATIENT: A CASE REPORT

https://doi.org/10.15605/jafes.039.S1.198

Yee Ling Tan, Siti Sanaa WA, Masliza Hanuni MA, Ahmad Wazi R, Johari MI

Hospital Sultanah Nur Zahirah, Kuala Terengganu, Malaysia

INTRODUCTION

Hypothyroidism is a disorder with multiorgan involvement that may lead to various complications. Pericardial effusion is commonly seen in cases of severe hypothyroidism, which may deteriorate into life-threatening cardiac tamponade. Early diagnosis and management of pericardial effusion in hypothyroidism is crucial.