

CONCLUSION

This patient was primarily investigated for glioma, but the histopathology report changed the course of investigation and treatment. Histologically, the oncocytic cell is a follicular “derived” thyroid cell which exhibits abundant granular eosinophilic cytoplasm and is positive for TTF1 and thyroglobulin immunostain. Clinical presentation varies from capsular to vascular and/or distant lymph node invasion, and metastatic spread. In this case, we describe the challenges encountered in diagnosing HTC. Brain metastasis of HTC is rare.

The unique presentation as a primary brain tumour with no thyroid nodule or neck swelling delayed the diagnosis. The prognosis of such cases is worse in a high-grade and poorly differentiated disease.

EP_A144**IODINE-131 RESISTANCE IN A CASE OF TOXIC ADENOMA REQUIRING MULTIPLE COURSES OF RAI-131**

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INTRODUCTION/BACKGROUND

Hyperthyroidism is a state of hyperactive thyroid gland secreting excessive thyroid hormone causing a constellation of symptoms to multiple organs and systems. Hyperthyroidism can be caused by an autoimmune condition (Graves’ disease), inflammation of the thyroid (thyroiditis), or due to functioning thyroid nodules (hot nodule or toxic multinodular goitre).

We report a case of toxic adenoma, who received Iodine-131 four times with a cumulative dose of 69 mCi; however, persistent hyperthyroidism required additional treatment with ATD. Subsequently, she underwent left hemithyroidectomy.

CASE

A 29-year-old female was referred to the nuclear department for radioactive iodine-131 (RAI-131) therapy. She received her first RAI-131 with 15 mCi in September 2020. Due to persistent hyperthyroidism, she received another RAI-131 with 15 mCi in April 2021. Her third RAI-131 with 21 mCi done in January 2022 and fourth RAI-131 with 18 mCi was done in June 2022 due to persistent hyperthyroidism requiring ATD. She had Tc-99 m pertechnetate thyroid uptake scan done with scan findings suggestive of toxic multinodular goitre in left thyroid lobe. She was planned for another RAI-131, however she refused.

Left hemithyroidectomy done in September 2023 with HPE reported as nodular hyperplasia with dominant nodule and cystic degeneration. She developed transient hypothyroidism after surgery requiring levothyroxine and subsequently euthyroidism without any medication.

CONCLUSION

RAI-131 is relatively safe and easy to administer making it the treatment of choice for many causes of hyperthyroidism. Around 10% of patients would require subsequent dose of RAI-131. Failure of RAI-131 for treatment of hyperthyroid is rare, mainly due to inadequate preparation. Some patients have delayed response to RAI-131, up to years after iodine treatment.

EP_A145**NAVIGATING THE CHALLENGES OF UNCONTROLLED THYROTOXICOSIS**

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INTRODUCTION/BACKGROUND

Thyrotoxicosis is a condition characterized by the excessive production of thyroid hormones. Commonly presented as Graves’ disease, other aetiology includes toxic multinodular goitre or subacute thyroiditis. Therapeutic approaches depend on the aetiology which includes anti-thyroid medications, radioactive iodine, or surgical intervention. We highlight 2 cases with different aetiologies of thyrotoxicosis that remained uncontrolled despite medical therapy and necessitated surgical intervention.

CASE 1

23-year-old female with diffuse goitre that was progressively increasing in size since the age of 15. She presented with classic thyrotoxicosis symptoms. She was confirmed to have Graves’ disease and was treated with carbimazole therapy. However, she remained uncontrolled after 2 years despite high dose carbimazole therapy (90 mg/day), lithium (600 mg/day), prednisolone (20 mg/day) and cholestyramine. She finally relented to surgical intervention as her definitive treatment. Her perioperative optimization was equally challenging and the addition of Lugol’s iodine a week prior to surgery brought her free T4 levels below 20 pmol/L. Through multidisciplinary collaboration between endocrinologists, surgeons and anaesthetists, she had a successful total thyroidectomy.

CASE 2

A 58-year-old female presented with a 7-year history of toxic multinodular goitre before her referral to our centre. She had been receiving fluctuating doses of carbimazole and her TFT remained uncontrolled. She also had retrosternal thyroid extension with mass effect. Her TFT remained uncontrolled despite carbimazole 25 mg/day, and coupled with compressive symptoms, navigated us towards definitive surgical intervention. Timely Lugol's iodine treatment optimized her TFT preoperatively and she successfully underwent total thyroidectomy.

CONCLUSION

Both cases highlighted the difficulty in managing thyrotoxicosis and surgical intervention was the best definitive treatment. Perioperative preparation is often challenging requiring multimodal approach to lower free T4 to acceptable levels prior to definitive thyroidectomy.

EP_A146

**GAZE BEYOND THE BOUNDARIES:
TRANSCENDING THE HURDLES IN
MANAGING GRAVES OPHTHALMOPATHY
IN A DISTRICT HOSPITAL SETTING**

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INTRODUCTION/BACKGROUND

Graves ophthalmopathy (GO) is an autoimmune condition characterized by inflammation and tissue expansion within the orbit. The pathogenesis of GO involves complex interactions between autoantibodies, inflammatory mediators, and orbital fibroblasts. GO affects both the soft tissues and the extraocular muscles, leading to a range of ocular manifestations, including proptosis, eyelid retraction, diplopia, and in severe cases, vision loss.

CASE

An 18-year-old female, a passive smoker with no significant medical history, presented to a district hospital with sudden onset of exophthalmos, eye discomfort, and double vision persisting for three weeks. She has a strong family history of thyroid disease. Physical examination revealed the patient to be in a state of thyroid storm and a clinical activity score (CAS) of 3. The ophthalmologic evaluation revealed bilateral proptosis, conjunctival injection, and restricted extraocular movements consistent with GO. Laboratory investigations confirmed hyperthyroidism. Orbital CT demonstrated enlargement of the extraocular muscles and expansion of orbital fat, further supporting the diagnosis of GO. The

patient was promptly initiated on treatment for thyroid storm, including antithyroid medications and supportive care to stabilize thyroid function. Systemic corticosteroids and lubricating eye drops were administered to alleviate ocular symptoms. With aggressive medical management, the patient's thyroid storm resolved, and ocular symptoms showed significant improvement throughout treatment.

CONCLUSION

This case highlights the importance of considering GO in the differential diagnosis of patients presenting with exophthalmos and ocular symptoms, especially when complicated by thyroid storm. Early recognition and collaborative management are essential for optimizing outcomes in such cases.

EP_A147

**OUTCOME OF THYROID STORM CASES
IN 2023 AT HOSPITAL TELUK INTAN,
MALAYSIA**

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INTRODUCTION/BACKGROUND

Thyroid storm, also known as thyrotoxic crisis, is an acute, life-threatening condition induced by the excessive release of thyroid hormones in individuals with thyrotoxicosis that present with systemic involvement. Thyroid storm mortality is estimated to be 8 to 25% despite modern advancements in its treatment and supportive measures. It is now an uncommon condition because of earlier diagnosis and treatment of thyrotoxicosis. Thyroid storm is commonly associated with Graves' disease, but it may occur in patients with toxic nodular goitre or any other cause of thyrotoxicosis. Thyroid storm may be precipitated by a number of factors including intercurrent illness, especially infections.

METHODOLOGY

This is a retrospective audit which included all patients who were admitted for thyroid storm from January 2023 to December 2023. The data was collected from clinical notes and electronic medical records.

RESULTS

A total of 23 subjects were included in this audit, which predominantly were female at 87%. Median age of the study population is 40 with the youngest subject aged 13 and the oldest was aged 64. The mean Burch and Wartofsky score was 47. For identifiable causes of storm, 13 out of 23 subjects