

thyroid gland with multiple foci of relatively decreased and increased radiotracer uptake which were compatible with toxic multinodular goiter. She was diagnosed with TMNG and underwent 25 mCi of I-131. After 2 months of I-131 therapy, she came to the emergency department with dyspnea, palpitation, dysphagia, and thyroid enlargement. Physical examination revealed an increased size of the thyroid gland, approximately 80 grams, with an inspiratory stridor. Laboratory investigation showed FT3: 13.41 pg/ml (1.6-4), FT4: 2.35 ng / dL (0.7-1.48) and anti-TSH-R: 33.42 IU/L (0-1.75). The chest film and computed tomography showed a narrowing of the tracheal lumen (4 mm in diameter). Furthermore, her serum calcium was 11.6 mg/dL (8.5-10.5), phosphate was 3 mg/dL (2.3-4.7), and iPTH was 130 pg/mL (15-65). A parathyroid MIBI scan was done which revealed a 0.9 x 1.1 cm non-MIBI avid nodule located at the upper pole of the left thyroid lobe, suspected for a parathyroid adenoma. She was diagnosed with post-I-131 therapy hyperthyroidism that caused upper airway obstruction concomitant with primary hyperparathyroidism. She was admitted to the intensive care unit and treated with propylthiouracil, dexamethasone, and propranolol. Subsequently, she underwent total thyroidectomy with left upper and lower parathyroidectomy, resulting in an improvement in her symptoms.

Our patient developed rebound hyperthyroidism with swelling of the thyroid after the I-131 treatment for 2 months, which resulted in impending upper airways. The present case highlights the need for physicians to be aware that rebound hyperthyroidism may present later than usual and may also cause thyroid swelling in some cases.

#### KEYWORDS

post-I-131 hyperthyroidism, thyroid swelling, rebound hyperthyroidism, upper airway obstruction, toxic multinodular goiter.

## PP-T-28

### THYROID ASSOCIATED OPHTHALMOPATHY IN A 63-YEAR-OLD FEMALE WITH HASHIMOTO'S THYROIDITIS

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#### CASE

Thyroid-associated ophthalmopathy (TAO) affects extraocular muscles and orbital connective tissue. Generally associated with Graves' disease with positive TRAb, and Hashimoto's disease as well. Although usually mild, severe forms of Hashimoto TAO may need serious treatment.

A 63-year-old Indonesian female came with a blurred, bulging, and double vision of the right eye 7 months prior accompanied by a prominent sign of hypothyroidism. Physical examination showed proptosis, swollen eyelid, and conjunctival injection of the right eye. The point Clinical Activity Score (CAS) was 5. Laboratory results showed high TSH, low FT4, TRAb of 9.74 IU/L, and anti-TPO of 62.47 IU/mL. Thyroid sonography revealed a right lobe hypoechoic nodule. Thyroid scan revealed cold nodule and FNAB showed benign struma adenomatosa. CT scan of the orbits showed bilateral proptosis with general muscle thickening. Hashimoto's thyroiditis and moderate-severe active TAO were established and treated with levothyroxine replacement, 4 cycles of high-dose steroid injection, and artificial tear drops.

We reported a rare case of severe TAO with Hashimoto's thyroiditis who needed steroid pulse therapy.

#### KEYWORDS

anti-TPO, Hashimoto's thyroiditis, hypothyroidism, ophthalmopathy, TRAb

## PP-T-29

### THYROTOXICOSIS WITH HIGH TRIIODOTHYRONINE (T3) AND LOW THYROXINE (T4): A CASE SERIES AND REVIEW OF CLINICAL AND MANAGEMENT

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#### INTRODUCTION

The thyroid function test with high FT3 and low FT4 is uncommon in hyperthyroidism patients. There is no clear treatment guideline, causing difficulty in adjusting the medication. The mechanism of this group of thyrotoxicosis is the increased conversion of T4 to T3 in the peripheral tissue. There has been an increase in dehydrogenase types 1 and 2 in a few reports. Furthermore, no relationship with thyroid cancer has been studied. This study aims to review clinical management and outcomes in thyrotoxicosis patients with high FT3, low FT4, and TSH.

#### METHODOLOGY

The data, including gender, age, TSH, FT3, FT4, medication, surgery, and tumor pathology, were collected retrospectively between 2015-2022 from Rajavithi Hospital's database. The inclusion criteria for selecting patients were: (1) 18 years old or over; and (2) at least one laboratory result shows low TSH with high FT3 and low FT4 levels.

## RESULTS

Between 2015–2022, we found 13 cases of thyrotoxicosis with at least 1 laboratory result showing low TSH, high FT3, and low FT4. Despite antithyroid drug alone or a block and replacement regimen, we were unable to maintain both FT3 and FT4 in the normal range. Eight patients were treated with a "block and replace regimen," 3 patients were treated with antithyroid drug alone, 2 patients had not taken any medication due to early surgery, and another refused treatment. Eleven patients underwent thyroidectomy, 5 patients had follicular thyroid carcinoma, 1 case had papillary thyroid cancer and 5 patients had benign hyperfunctioning adenoma.

## CONCLUSION

This result suggests that the patients with high FT3 and low FT4 were unlikely to maintain FT3 and FT4 in the normal range with either an antithyroid drug alone or block and replace regimen. The mechanism of T3 thyrotoxicosis patients is caused by the increased conversion of thyroxine (T4) to triiodothyronine (T3). Moreover, we found a high malignancy rate in this type of patient.

## KEYWORDS

thyrotoxicosis, triiodothyronine, (T3), thyroxine, (T4), hyperthyroid, discordance

## PP-T-30

### HYPOTHYROIDISM ASSOCIATED HYPOKALEMIA PERIODIC PARALYSIS

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## CASE

A 29-year-old female, recently delivered a baby girl, present with recurrent attacks of acute weakness in all 4 limbs. The patient had a history of hyperthyroidism during the 3<sup>rd</sup> trimester of her pregnancy in 2022. She didn't receive treatment for hypothyroidism at that time. On examination, the patient had quadriparesis with hypotonia, diminished deep tendon reflexes, delayed relaxation of ankle jerks and flexor plantar response, and prominent muscle weakness in both legs. She had normal mental function without any cranial nerve, sensory, or sphincter

involvement. The blood test showed hypokalemia at 1.8 mmol/l, T4: 4.11 pmol/l, T3: 2.93 pmol/l, TSH: >100 mUI, anti-TPO: 191.3 UI/ml, anti-Tg: 557 UI/ml and 24-hr urine K: 25 mmol/24 h. The patient was treated with: KCl 3 g by syringe pump in 5 ml/H, kaleorid 600 mg 6 cp, and levothyroxine 75 ug. Recurrent hypokalemic paralysis is an extremely unusual presentation of hypothyroidism. To the best of our knowledge, this is the fourth reported case of hypothyroidism associated with recurrent hypokalemic paralysis.

## KEYWORDS

hypothyroidism, hypokalemic periodic paralysis

## PP-T-31

### AGGRESSIVE SYNCHRONOUS PAPILLARY AND FOLLICULAR THYROID CARCINOMAS IN A PATIENT PRESENTING WITH HYPERTHYROIDISM FROM GRAVES' DISEASE

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## CASE

We report a case of an uncommonly aggressive presentation of the rare entity of synchronous papillary (PTC) and follicular thyroid carcinomas (FTC) in a 67-year-old female initially presenting with thyrotoxicosis from Graves' disease. She was found to have 2 thyroid nodules with extensive intra-cardiac tumour thrombus, symptomatic left pelvis bony metastasis with pathological fracture, pulmonary metastases, and mediastinal lymph node metastases. Further investigations suggested a diagnosis of synchronous papillary and metastatic follicular thyroid cancer. Treatment with radical surgery followed by adjuvant therapeutic radioiodine ablation was proposed, but the patient declined all forms of cancer-specific therapy and elected solely a palliative approach to treatment.

## KEYWORDS

papillary thyroid carcinoma, follicular thyroid carcinoma, synchronous thyroid cancer, Graves' disease