

## CONCLUSION

Managing DTC in the presence of GO represents a significant challenge to the treating physician. A multidisciplinary approach and in-depth discussion with patients are essential in making treatment decisions.

## EP\_A086

### MYELODYSPLASTIC SYNDROME AND GRAVES' DISEASE

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**Yong Siang Ng, Qing Ci Goh, Woh Wei Mak, Gayathri Devi Krishnan, Yoke Mui Ng, Shazatul Reza Mohd Redzuan, Subashini Rajoo, Mohamed Badrulnizam Long Bidin**

*Hospital Kuala Lumpur, Malaysia*

#### INTRODUCTION

Myelodysplastic syndrome (MDS) is a heterogeneous group of hematopoietic neoplasms characterized by bone marrow failure resulting in cytopenia and dysplastic haematopoiesis. The association between MDS and autoimmune diseases has been previously described in the literature. Here we report a case of Graves' disease (GD) with secondary MDS.

#### CASE

A 43-year-old male with vitiligo was admitted for pancytopenia and left parapneumonic effusion. GD was concomitantly diagnosed based on weight loss, tachycardia, exophthalmos and the presence of TSH receptor antibodies. Antithyroid drugs were carefully used with close monitoring of cell counts. Despite clinical improvement with antibiotics and achievement of biochemical control of hyperthyroidism, cytopenia persisted. Results showed WBC  $1.58$  to  $3.38 \times 10^9/L$ , absolute neutrophil counts  $0.65$  to  $1.18 \times 10^9/L$ , haemoglobin  $9.6$  to  $10.6$  g/L, and platelet counts  $74$  to  $10^7 \times 10^9/L$ . Autoimmune panels tested negative. Peripheral blood film revealed pancytopenia without evidence of haemolysis or blast cells. Bone marrow aspirate and trephine biopsy showed mildly hypocellular marrow with relatively reduced myelopoiesis together with subtle dysplastic changes of erythrocytes and megakaryocytes. No cytogenetic abnormality was detected.

Emerging evidence suggests that autoimmune diseases are risk factors for MDS. A Swedish population-based study demonstrated an apparent link between the development of MDS and autoimmune diseases. Most of the reported cases had a history of hypothyroidism. The development of MDS in relation to autoimmune diseases is still poorly understood. The proposed explanations include shared genetic or environmental risk factors, a direct insult to

the bone marrow leading to malignant transformation by untreated autoimmune diseases, or the inflammatory process from a haematological neoplasm resulting in the subsequent diagnosis of an autoimmune disease.

## CONCLUSION

Our case highlighted the association between autoimmune thyroid disease (GD) and MDS. Further studies to underpin the association and pathophysiology are required.

## EP\_A087

### THE CALM BEFORE THE STORM AND THE STORM BEFORE THE CALM: A CASE OF RETRACTABLE THYROID STORM

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**Mohd Hazriq A, Aimi Fadilah M, Nur Aini EW, Aisyah Z, Fatimah Zaherah MS, Rohana AG**

*Fakulti Perubatan, Universiti Teknologi MARA (UiTM), Sungai Buloh, Malaysia*

#### INTRODUCTION

Thyroid storm is a severe complication of hyperthyroidism with a high mortality rate. Multimodal pharmacotherapy is the cornerstone of treatment. In severe cases, plasmapheresis may also be done. However, this practice is not widespread with a lack of clear guidelines.

#### CASE

We describe a 37-year-old female with severe thyroid storm and multiple organ failure. She initially presented with a three-week history of worsening jaundice, dyspnea and pedal edema. At presentation, she was neurologically intact but had prominent jaundice, congestive heart failure, atrial fibrillation, goiter and mild thyroid ophthalmopathy. Tests revealed elevated FT4  $>90$  pmol/L, TSH  $<0.01$  mIU/L, bilirubin  $267$   $\mu\text{mol/L}$  and coagulopathy. With a Burch-Watforsky Point Scale of 65, full pharmacotherapy for thyroid storm was promptly instituted. Due to lack of clinical improvement and rising bilirubin, we resorted to plasmapheresis after seven days with a view for early thyroidectomy. Plasmapheresis was administered over three sessions and resulted in normalization of FT4 ( $14.32$  pmol/L), resolution of heart failure, and improvement of bilirubin and other blood parameters. Three days later, sensorium quickly deteriorated to coma requiring intubation. EEG showed nonconvulsive seizure; other neurologic investigations were non-contributory. Her condition was further complicated with retractable arrhythmia, worsening coagulopathy with lower gastrointestinal bleed, and rising FT4 level and liver function tests. Four further courses of plasmapheresis were administered to control FT4, with improvement in other biochemical markers, subsequent

## EP\_A084

### TROCHANTERIC FEMORAL FRACTURE UNRAVELS FUNCTIONAL METASTATIC FOLLICULAR THYROID CARCINOMA: A CASE REPORT

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Ilham Ismail, Chee Keong See, Saiful Shahrizal Shudim, Nurbadriah Jasmiad, Zhe Lan Wong, Eileen Tan

*Hospital Sultan Haji Ahmad Shah, Temerloh, Malaysia*

#### INTRODUCTION

In postmenopausal women, the aetiology of low-trauma trochanteric femoral fractures is often attributed to osteoporosis. However, a pathologic fracture must also be considered. Follicular thyroid carcinoma (FTC) is the second most common thyroid malignancy, but it rarely co-exists with hyperthyroidism. FTC can metastasize to bone, lung and mediastinum. Functioning metastatic disease in FTC is rare but have been reported in literature.

#### CASE

We report a case of metastatic FTC presenting with a pathologic trochanteric fracture and uncontrolled hyperthyroidism.

A 63-year-old female sustained a closed intertrochanteric femoral fracture following a low-trauma fall. She was receiving antithyroid medication for hyperthyroidism. Initial tests showed elevated FT4 (30.7 pmol/L), suppressed TSH and negative thyroid autoantibodies. Neck ultrasonography showed multiple thyroid nodules, including a 5.6 cm x 6.5 cm TIRADS 5 nodule. Following FNAC showing follicular neoplasm, she underwent total thyroidectomy with level 6 paratracheal lymph node dissection due to tumour infiltration of the right internal jugular vein (IJV) and parathyroid gland. Histopathology revealed a high-risk invasive FTC (pT4apN1a). Despite thyroidectomy, she remained hyperthyroid and required increased antithyroid therapy. Postoperative neck CT and carotid angiography revealed residual thyroid tissue and long segment IJV and superior vena cava thrombosis. No residual tissue was detected on re-operation. Concomitant high thyroglobulin (>5000 ng/mL) prompted F-fluorodeoxyglucose PET/CT which revealed recurrent disease at the thyroid bed, and metastases to cervical nodes, mediastinum, lungs, left femur and trochanter.

#### CONCLUSION

This illustrates a complex case of FTC coexisting with hyperthyroidism, and metastases likely to be functionally active thyroid tissue. Subsequent management would

require combined surgical intervention for trochanteric fracture with local radiation therapy and radioiodine ablative therapy.

## EP\_A085

### THE CONUNDRUM OF RADIOACTIVE IODINE TREATMENT IN CONCOMITANT DIFFERENTIATED THYROID CARCINOMA AND GRAVES' OPHTHALMOPATHY

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Ee Wen Loh, Shireene Ratna Vethakkan, Jeyakantha Ratnasingam, Lee-Ling Lim, Quan Hziung Lim, Nicholas Ken Yoong Hee, Sharmila Sunita Paramasivam

*University Malaya Medical Centre, Kuala Lumpur, Malaysia*

#### INTRODUCTION

Although uncommon, concomitant differentiated thyroid carcinoma (DTC) has been reported in patients with Graves' disease (GD). Surgery is the mainstay treatment for DTC followed by radioactive iodine (RAI) ablation in selected patients. RAI therapy may pose a problem in patients with concurrent Graves' ophthalmopathy (GO) as it may potentially worsen the ophthalmopathy. This could result in a treatment conundrum.

#### CASES

**Case 1.** A 63-year-old female presented with significant bilateral exophthalmos and ophthalmoplegia. She had a diffuse goiter and was thyrotoxic, with high TSH-stimulating immunoglobulin (TSI) levels. She was diagnosed as GD with sight-threatening GO. She received multiple courses of methylprednisolone as well as immunosuppressant therapy for GO. She underwent total thyroidectomy as definitive therapy. Histopathologic examination (HPE) of the thyroid gland revealed papillary thyroid carcinoma (PTC) in both thyroid lobes, with resection margin of <0.1cm in the right lobe. Following counseling for RAI ablation, she refused RAI due to the risk of worsening GO. She is currently on regular surveillance with no evidence of PTC recurrence to date.

**Case 2.** A 41-year-old female developed moderate active GO three years after initial diagnosis of GD. She was given high-dose prednisolone for GO and underwent total thyroidectomy as definitive therapy for GD. HPE showed multifocal follicular thyroid carcinoma with suspicion of vascular permeation. After multi-disciplinary discussions, she underwent 10 fractions of ocular radiotherapy and received prophylactic prednisolone cover during RAI. On close monitoring, her GO has remained stable thus far.