CONCLUSION
This case highlights the need for a high index of clinical suspicion for the presence of parathyroid carcinoma pre-operatively in patients who exhibit severe hypercalcemia, markedly raised PTH and bone manifestations so that en bloc-resection of the parathyroid with ipsilateral partial thyroidectomy and central node dissection can be planned prior to surgery.

EP_A005

THYMIC HYPERPLASIA IN GRAVES' DISEASE: A DIAGNOSTIC AND MANAGEMENT CHALLENGE

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INTRODUCTION/BACKGROUND
Thymic hyperplasia is a recognized but frequently underappreciated entity associated with Graves' disease (GD). It is often misinterpreted as a mediastinal mass, potentially leading to unwarranted biopsies or surgical intervention. The underlying pathophysiological mechanisms remain poorly understood. Spontaneous regression of the mediastinal mass following euthyroidism with effective thyrotoxicosis treatment supports a benign etiology. Here, we present a case of a young female with GD and an incidentally discovered anterior mediastinal mass, highlighting the diagnostic complexities that necessitated a multidisciplinary approach.

CASE
A 21-year-old female presenting with a large goiter, a thyrotoxic state (FT4 >100 pmol/L, TSH 0.01 mU/ml and anti-TSH receptor Ab >40 IU/L) with no thyroid ophthalmopathy was diagnosed with GD. Despite medical management, adequate control of her thyroid hormone levels proved to be challenging, prompting a surgical consultation for a potential thyroidectomy. To assess the extent of the goiter, computed tomography (CT) imaging was performed, revealing a grossly enlarged thyroid gland with mild tracheal narrowing and a well-defined, solid, enhancing 5.6 cm × 6.4 cm × 4.3 cm anterior mediastinal mass.

Given the initial concern for an ectopic thyroid gland or malignancy, performing an invasive biopsy was considered. However, a multidisciplinary team consisting of experts from endocrinology, surgery, respiratory medicine, radiology, and nuclear medicine reviewed the findings and concluded that the mass was most consistent with thymic hyperplasia. Considering the high surgical risk, a conservative approach was pursued, with the patient undergoing radioiodine therapy for thyrotoxicosis and serial imaging to monitor the mediastinal mass. Long-term outcomes are yet to be seen.

CONCLUSION
This case underscores the diagnostic challenges posed by thymic hyperplasia in patients with GD and the potential for misdiagnosis as a mediastinal pathology. Awareness of this association is crucial in order to avoid unnecessary surgical interventions. A multidisciplinary approach is essential for accurate diagnosis and optimal management, promoting a conservative therapeutic strategy when appropriate.

EP_A006

GRANULOMATOUS DISEASE-INDUCED SEVERE HYPERCALCEMIA

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INTRODUCTION/BACKGROUND
Hypercalcemia is commonly seen in granulomatous disease especially in sarcoidosis in around 40-50% cases; however, lower rates of association have been reported in tuberculosis. The etiology is due to the production of extrarenal 1-alpha-hydroxylase enzymes by activated macrophages seen in the granulomas. This will then lead to inappropriately elevated 1,25-dihydroxyvitamin D causing dysregulation of calcium metabolism.

CASE
A patient with a known case of disseminated tuberculosis (TB) was admitted to critical care with an initial impression of cerebral toxoplasmosis. Throughout his admission, blood parameters were closely monitored which revealed moderate to severe hypercalcemia ranging from 2.8-4.0 mmol/L with clinical features of nephrogenic diabetes insipidus (polyuria of 5440 ml urine output per day, hypernatremia ranging 147-157 mmol/L (135-145 mmol/L) and low urine osmolality 143 mOsm/kg). However, despite treatment with hydration, severe hypercalcemia resulted in the atypical presence of J-wave or Osborn wave on electrocardiogram (ECG). Hypothermia has been ruled out as his body temperature ranges from 36.7-37 °C. There is no interruption in his TB medications and iatrogenic