

metabolic acidosis. A trial of short-acting Sandostatin was able to alleviate the symptoms temporarily. He was then started on Octreotide LAR 30 mg every 4 weeks, which dramatically improved his diarrhoea. Unfortunately, the effect of Octreotide LAR was transient. In view of refractory diarrhoea despite the combination of short- and long-acting somatostatin analogues, systemic therapy via PRRT was started in October 2018.

CONCLUSION

PRRT offers a step-change in the therapeutic options for functioning pancreatic neuroendocrine tumour. However, data on the efficacy of this treatment on individual functional pNET secreting VIP is still lacking.

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Characteristics of Primary Hyperparathyroidism in a Tertiary Referral Centre and Incidence of Hungry Bone Syndrome

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INTRODUCTION

Primary hyperparathyroidism (PHPT) is a common endocrine disorder discovered by routine biochemical screening. The most commonly reported aetiologies are parathyroid adenoma (80 to 85%), parathyroid hyperplasia (15%) and parathyroid cancer (5%). This condition is associated with excess morbidity and mortality.

METHODOLOGY

We described the clinical characteristics, biochemical findings and treatments that influence the outcome of parathyroidectomy and the incidence of hungry bone syndrome in our PHPT patients. We conducted a retrospective review of confirmed PHPT cases who underwent parathyroidectomy in Hospital Putrajaya, an endocrine referral centre, from January 2002 to February 2018. Electronic medical records were reviewed and patient details such as clinical data, laboratory results, medications, imaging, surgical treatment and post-operative outcomes were analysed using SPSS 17.

RESULTS

Of the 345 patients included for analysis, majority were female (n=228, 66.1%) with a mean age of 52.15 years (± 14.78), with 141 subjects (41%) younger than 50 years. Majority were Malays (41.4%), followed by Chinese (38.8%) and Indian (17.7%). Hypercalcemic manifestations were seen in 82.8%, presenting as renal calculi (46.4%), bone pain (30.1%), fatigue (17.1%), gastritis (14.2%) and

fracture (5.5%). While mean serum calcium at presentation was 3.10 mmol/L (± 0.61), 82.6% had serum calcium more than 2.85 mmol/L and 17.2% had severe hypercalcemia (≥ 3.5 mmol/L). Mean levels of serum phosphate, intact parathyroid hormone and alkaline phosphatase were 0.79 mmol/L (± 0.25), 27.95 pmol/L (range 5.5 to 616) and 126 IU/L (range 28 to 2879), respectively. The mean estimated glomerular filtration rate (eGFR) was 38.3 mL/min/1.73 m², with renal impairment (eGFR <60 mL/min/1.73 m²) in 38.6%. Nearly two-thirds received at least one medical therapy preoperatively (saline diuresis, bisphosphonate or subcutaneous calcitonin). Majority of the cases were histologically confirmed adenoma (76.7%), with the rest being hyperplasia, normal or carcinoma. Hungry bone syndrome postoperatively was seen in 10.8%.

CONCLUSION

PHPT cases in our setting were more symptomatic, with higher serum calcium levels and more frequent findings of nephrolithiasis and renal impairment.

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Catecholamine Requests in Malaysia: Hospital Kuala Lumpur's Experience

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INTRODUCTION

The Chemical Pathology Unit in Hospital Kuala Lumpur is one of the centres that offer 24-hour urinary catecholamines in Malaysia. Urinary catecholamine determination is a specialised and expensive test offered in limited centres in Malaysia. It is important to reduce inappropriate requests as they can make up a large proportion of laboratory workload leading to unnecessarily increased cost. We review the clinical indications and the significance of results obtained for each catecholamine request sent to our laboratory.

METHODOLOGY

This is a retrospective study involving all requests for 24-hour urinary catecholamine tests sent from all over Malaysia that were available from 2014 until 2016. Clinical indications for requesting the test were reviewed based on information provided in the request forms. Catecholamine results were gathered from the laboratory information system. Clinical indications were classified into 5 categories. Results were tabulated into 3 groups: normal, borderline and abnormal.

RESULTS

A total of 3,151 requests and results were reviewed. The main indication for the test was for hypertension work-up (85%), followed by nonspecific indications (9.4%), adrenal mass work-up (4%), neuroblastoma (1%) and MEN syndromes (0.1%). Out of 3,151 results, 0.5% were reported as abnormal (with significant elevation in any catecholamine metabolites) and 8% borderline (with non-significant elevation). For screening of secondary causes of hypertension, only 0.3% was found to have abnormal results. Some interventions taken by the laboratory to improve laboratory test utilisation include continuous feedback to clinicians for nonspecific indications, and revision of laboratory policy which allows only specialists to order the test.

CONCLUSION

In our institution, only 0.5% of the urinary catecholamine results were reported abnormal, consistent with the rare nature of the related diseases. The very low percentage of abnormal results for screening of secondary causes of hypertension may indicate the need to review the test ordering practices among clinicians.

PP-38

Incidence, Mortality and Clinical Outcome of Patients Hospitalised for Thyrotoxicosis with and without Thyroid Storm in a Single Tertiary Hospital

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INTRODUCTION

Current evidence on the incidence and outcomes of patients with thyroid storm in Malaysia is limited. We determined the incidence of thyrotoxicosis with and without thyroid storm and clinical outcomes among hospitalised patients in a tertiary hospital during an 8-year period.

METHODOLOGY

A retrospective analysis of clinical characteristics, mortality, hospital length of stay and treatment of thyrotoxic patients with age more than 18 years old in a tertiary hospital with an endocrine service from 2000 to 2018 was performed. Electronic medical records were reviewed to obtain data on predisposing factors, associated conditions and treatment during hospitalisation.

RESULTS

A total of 249 hospitalised patients with thyrotoxicosis were included. Most were female (73.9%), with a mean age 48.23±0.154 years, and of Malay (26.1%), Chinese (13.7%) and Indian (3.2%) ethnicity. Only 19 (7.7%) were diagnosed with thyroid storm. Graves' disease (59.8%) was the most common cause of hyperthyroidism, and 15.7% of these hospitalised patient were admitted after one month of being diagnosed. Majority of the patients received carbimazole (81%), with a mean dosage of 20.7 mg OD (±0.77). Precipitating factors included a history of non-compliance to anti-thyroid medication (27.7%) and surgical procedure (10.8%). Mortality and mean length of stay for thyrotoxicosis with or without storm is 6% and 5.91 days (±0.356), respectively. The associated conditions that may have increased morbidity were found in many patients: these included atrial fibrillation (18.9%), acute heart failure (11.6%), acute respiratory failure (10%), acute coronary syndrome (8%), acute renal failure (4.8%), invasive ventilation (4.4%), diabetic ketoacidosis (3.6%), acute ischemic stroke (3.2%), cardiac arrest (2%), acute liver failure (1.8%), supraventricular tachycardia (1.2%), cardiogenic shock (1.2%), non-invasive positive pressure ventilation (1.2%), encephalopathy (1.2%), intracranial haemorrhage (1.2%), adrenal insufficiency (0.8%) and pulmonary embolism (0.4%).

CONCLUSION

Associated conditions were found to be frequent in hospitalized patient with thyrotoxicosis with or without thyroid storm. The small percentage of thyroid storm may reflect underreporting or under recognition.

PP-39

Favourable Outcomes of Lithium Carbonate in the Management of Concomitant Thyrotoxicosis and Acute Dengue-Induced Hepatitis and Neutropenia

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INTRODUCTION

Dengue is one of the most important arthropod-borne viral diseases in tropical countries. The liver is one of the most common organs affected, seen in approximately 60 to 90% of patients. It is an arduous task for clinicians to predict the clinical outcomes of dengue-induced hepatitis and neutropenia, particularly in the presence of concomitant thyrotoxicosis and the attendant risks of its