

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.

## PP-36

### 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 ( $\pm 14.78$ ), 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 ( $\pm 0.61$ ), 82.6% had serum calcium more than 2.85 mmol/L and 17.2% had severe hypercalcemia ( $\geq 3.5$  mmol/L). Mean levels of serum phosphate, intact parathyroid hormone and alkaline phosphatase were 0.79 mmol/L ( $\pm 0.25$ ), 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 m<sup>2</sup>, with renal impairment (eGFR <60 mL/min/1.73 m<sup>2</sup>) 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.

## PP-37

### 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.