POSTER PRESENTATIONS

ADRENAL

PP-A-01

FEMINIZING ADRENOCORTICAL CARCINOMA WITH SUBCLINICAL CUSHING'S SYNDROME IN A YOUNG ADULT MALE

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BACKGROUND
Adrenocortical carcinoma is a rare endocrine neoplasm which are hormonally active in almost 50% of cases. Feminizing adrenal tumors are only seen in 1-2% of ACC.

CASE
A 39-year-old Filipino male presented with a seven-month history of bilateral gynecomastia, intermittent epigastric pain and unintentional weight loss. Initial work-up revealed a large, heterogeneously-enhancing adrenal mass (24.9 x 12.6 x 18.2 cm) on abdominal computed tomography. Hormonal assessment showed elevated DHEAS (43.75, NV: 3-14.2 umol/L), estradiol (3212.4, NV: 11.65-82.13 pg/ml) and suppressed FSH (<0.08, NV: 1.0-10.5 mIU/ml) and LH (< 0.05, NV: 1.9-9.4 mIU/ml).

Serum cortisol remains unsuppressed after 1 mg dexamethasone test (18.71 ug/dL). The clinical findings of bilateral gynecomastia with no signs of hypercortisolism associated with elevated estradiol and unsuppressed cortisol pointed to a diagnosis of adrenal tumor with mixed hormonal secretion. The patient underwent left adrenalectomy, nephrectomy, pancreatectomy with splenectomy. Histopathology revealed diffuse staining with synaptophysin and weak to moderate staining with MELAN-A and inhibin with 40% Ki-67 index consistent with adrenocortical carcinoma. Five days postoperatively, repeat hormonal workup showed a decrease in estradiol (2326.1 pg/ml) and normalization of FSH (1.48 mIU/ml).

CONCLUSION
Functional ACC is more likely to present with metastatic disease than non-functional ACC, and portends shorter survival. Feminizing ACC has been associated with worse prognosis that is inversely related with estradiol levels. Estrogen excess results from an increase in substrate and presence of aromatase activity within the tumor. This case underscores the importance of hormonal profiling of ACC patients and its associated prognostic implications.

PP-A-02

EPIDEMIOLOGIC PROFILE AND CLINICAL OUTCOMES OF PATIENTS WITH PHEOCHROMOCYTOMA AT THE PHILIPPINE GENERAL HOSPITAL

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OBJECTIVES
Pheochromocytomas are rare catecholamine-secreting neuroendocrine tumors. They exhibit great variability in terms of clinical behavior which makes it challenging to diagnose. This study aims to describe the epidemiologic profile and to determine the clinical outcomes of patients with pheochromocytoma at the Philippine General Hospital.

METHODOLOGY
We reviewed the medical records of 30 adult patients with clinical, biochemical and histopathologic-proven diagnosis of pheochromocytoma from January 2010 to December 2021. Demographic, clinical characteristics and clinical outcomes were collected. Outcome measures included clinical and/or biochemical remission, recurrence and metastasis.

RESULTS
The median age at diagnosis of pheochromocytoma was 37.5 years (IQR 28-55).The most common metabolic comorbidities detected were glucose intolerance (60%) and hypertriglyceridemia (23.3%). Majority of the patients were hypertensive (90%) on diagnosis. Two-thirds of patients presented with classic features of pheochromocytoma while the remaining third presented with adrenal incidentalomas. Recurrence was found in 17% of subjects, where in those with younger age of presentation (25 years vs 46.5 years, p=0.0229) and bilateral pheochromocytoma (0 vs 75%, p=0.002) had higher likelihood of recurrence. Metastatic pheochromocytoma was found in 10% of the subjects in our institution.

CONCLUSION

Although majority of the patients presented with symptoms related with catecholamine excess, almost one third of the patients had incidental discovery. Incidence of pheochromocytoma recurrence and metastasis in our setting has been shown to be comparable with current available studies. This study has demonstrated a low rate of genetic testing likely due to limited access to the test in our setting.

PP-A-03

HYPOKALAEMIA AND COMORBIDITIES ARE COMMON AT INITIAL PRESENTATION IN PATIENTS WITH PRIMARY HYPERALDOSTERONISM

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OBJECTIVES

Primary hyperaldosteronism (PH) is the most common endocrine cause of hypertension (HTN) and is associated with end organ damage. About 30% of cases present with hypokalemia. Studies on the presentation of PH among the Indian population is lacking. This study evaluated the presenting characteristics of patients with PH from Eastern India.

METHODOLOGY

This is a retrospective study that included Saline Suppression Test (SST) confirmed PH patients.

RESULTS

The study involved seventy-eight confirmed PH patients with mean age of 55 ± 13 years and male-to-female ratio of 1.5:1. Mean duration of HTN was 13.3 ± 7.6 years and 62% had HTN more than 10 years. Mean SBP and DBP was 165.1 ± 13.5 mm Hg and 96.2±14.4 mm Hg, respectively. The mean number of anti-hypertensive medications was 3 ± 0.7. Majority presented with hypertension and hypokalemia (78%), 52% of which were spontaneous while 26% were diuretic-induced. About 14% presented with resistant HTN and 8% with adrenal incidentaloma. Overall, 64% of subjects had resistant HTN. Approximately 16.7% of patients experienced hypokalemic periodic paralysis. Mean serum sodium and potassium levels were 139.4 ± 2.3 mmol/l and 3.08 ± 0.6 mmol/l, respectively. Mean eGFR was 71.8 ± 20.8 ml/min/1.73 m^2, with 39.7% having Stage 3 CKD. Majority (95%) had comorbidities from end organ damages, with 43% having multiple comorbidities.

CONCLUSION

Our study revealed a high proportion of hypokalemia and resistant hypertension at detection of PH suggesting delayed diagnosis. A significant number of patients had comorbid illnesses due to end organ damage at presentation, highlighting the need for awareness, early screening and appropriate management of PH.

PP-A-04

IDENTIFICATION OF ALDOSTERONE E-DRIVER SOMATIC MUTATIONS IN CELL-FREE DNA FROM ADRENAL VEIN SAMPLES OF PRIMARY ALDOSTERONISM PATIENTS

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OBJECTIVES

Cell-free DNA fragments (cf-DNA) of tumour cells are often found in the blood downstream to the tumour due to the high apoptosis/necrosis rate of the cells. Primary aldosteronism (PA), a curable cause of secondary hypertension, is commonly due to an autonomous aldosterone-producing adenoma (APA) that harbours a somatic mutation in an aldosterone-driver gene. We aimed to determine the utility of cf-DNA genotyping from adrenal vein samples (AVS) for aldosterone-driver gene mutations as a biomarker for APA.

METHODOLOGY

Genotyping of cf-DNA from AVS of PA patients was performed using the Agena MassARRAY platform. In this study, six samples of cf-DNA from three PA patients were interrogated.

RESULTS

Of the three PA patients, two had unilateral APA and one had bilateral APA. Of the six cf-DNA samples, two samples from the same patient (right adrenal and left adrenal) were found to have a mutation in an aldosterone-driver gene. Genotyping of the cf-DNA of the right AVS yielded a CTNNB1 S45P mutation whereas the cf-DNA of the left AVS had a KCNJ5 G151R mutation.