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BILATERAL ADRENAL MASSES: A SINGLE CENTER EXPERIENCE

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INTRODUCTION
Bilateral adrenal masses are uncommon and present with varied clinical manifestations and aetiologies. Understanding the prevalence and characteristics of different aetiologies of adrenal masses is crucial for instituting effective management strategies.

METHODOLOGY
A retrospective analysis was conducted on 34 patients with bilateral adrenal masses evaluated at the Endocrine Centre, Hospital Putrajaya, from 2015 to 2024.

RESULT
The mean age of our cohort was 53.7 ± 16.7 years, the majority being male (58.8%). Pheochromocytoma was the most common aetiology (10 cases, 28.6%), presenting at a younger mean age of 41.2 ± 17.5 years, with half of the cases being clinically silent. The mean size of the adrenal masses was 3.47 ± 1.94 cm. Seventy percent of patients had confirmed genetic defects, and all had benign histopathology except one with features of a tumour likely to have a malignant behaviour. This patient had a positive VHL variant. Similarly, non-functioning bilateral adenomas contributed 10 cases (28.6%), which were all asymptomatic. The mean age at presentation was 64.3 ± 8.9 years, and the mean size of the adrenal masses was 1.32 ± 0.44 cm. Chronic infection was found in seven cases (20%) of bilateral adrenal masses (three tuberculosis, two histoplasmoses, one MRSA/salmonella bacteraemia and one adrenalitis from an unknown infectious agent), with 85.7% of them exhibiting symptoms of hypocortisolism. Malignancy represented a minority of cases (4, 11.4%), with one case of adrenal lymphoma and three cases of adrenal metastasis. These cases presented at an older age (mean age: 62 ± 10.3 years) with no disturbance of adrenocortical function. The mean size of the adrenal masses was 5.67 cm for lymphoma and 1.92 ± 0.48 cm for adrenal metastasis. Other etiologies observed included two cases of cortisol-secreting adenoma, one case of adrenal oncocytoma, and one case of unknown cause.

CONCLUSION
This retrospective analysis reveals diverse aetiologies of adrenal masses, including pheochromocytoma, nonfunctioning adenomas, infections, and malignancies. Variability in presentation, age, and size underscores the need for comprehensive evaluation and tailored management strategies for this complex patient population.