Larger size of Conn's adenoma is associated with lower cure rates post adrenalectomy.

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Abstract

Background: The cure for patients with primary hyperaldosteronism (PHA) secondary to solitary adrenal adenoma is adrenalectomy. We investigated the impact of size of Conns' tumour on hypertension resolution in a multi-ethnic South East Asian Cohort.

Methods: Retrospective cohort study of patients who underwent surgery for PHA between January 2010 to December 2022 was performed. Clinicopathological parameters that included tumour size, blood pressure parameters, class and dosage of drugs, biochemical indices and details of surgery were collected. Cure of hypertension was defined as normal blood pressure post-adrenalectomy. Statistical significance was defined as a P value of < 0.05.

Results: 94 patients (40 female:54 male; 102 women; age 49.3 ± 11.8 years) with PHA were operated on laparoscopically (79 trans-abdominal and 15 retroperitoneal approach). Tumour size ranged from 0.4 to 4.6 cm (mean 1.5 ± 0.6 cm). Hypertension Grades were Grade 1 in 38 (40%), Grade 2 in 45 (48%) and Grade 3 in 11 (12%) patients. Patients were on a mean of 3 classes of drugs prior to surgery and this decreased to mean of 1 class of drug post adrenalectomy. All patients were rendered normokalaemic and overall cure of the patients from hypertension was 82.0%. Large adenoma (defined as greater than 1.5 cm) resulting in a greater decrease in blood pressure (mean decrease of 32mmHg systolic, 15mmHg diastolic and MAP 20mmHg) in comparison to smaller adenomas ($p = 0.003$), but with lower cure rates of hypertension ($p = 0.038$).

Conclusions: Large Conn's adenomas result in a greater reduction in blood pressure post-adrenalectomy but with decreased cure rates of hypertension compared to the small adenomas.

Keywords: Adrenalectomy; Conn’s adenoma; Hyperaldosteronism; Hypertension.