

17<sup>th</sup> International Conference on

# NEPHROLOGY & UROLOGY

March 12-13, 2018 London, UK

## Spectrum of renin angiotensin aldosterone system disorders in young hypertensives of Pakistan

**Mehwish Gilani**

Armed Forces Institute of Pathology, Pakistan

The study was a cross sectional study conducted at the Department of Chemical Pathology and Endocrinology, Armed Forces Institute of Pathology (AFIP) Rawalpindi from Jan 2016 to Dec 2016. One hundred and sixty-five young hypertensive subjects, aged 17-40 years of either gender presenting in the outpatient department (OPD) were recruited from local population of Rawalpindi. All subjects were having blood pressure more than 140/90 mm of Hg and were not on any anti-hypertensive medicine. Patients with renal dysfunction, heart failure, pregnancy and secondary hypertension were excluded from the study. Blood sample was taken from each patient to analyze arterial blood gases, plasma renin, serum aldosterone and electrolytes. Sandwich chemiluminescence immunoassay and ELISA techniques were used to analyze plasma renin and serum aldosterone level. Arterial blood gases and electrolytes like sodium and potassium were measured by potentiometry, while bicarbonate was calculated. Normally distributed continuous variables were presented as mean+SD and others as median. Multiple regression analysis was performed to compute association of age, electrolytes, systolic and diastolic blood pressure in OPD and Endocrine Clinic AFIP with essential hypertension and primary hyperaldosteronism.  $P < 0.05$  was considered statistically significant. Out of 80 subjects, 72 were diagnosed with essential hypertension and 8 with primary hyperaldosteronism. None of the patients had Liddle syndrome, apparent mineralocorticoid excess or Gordon syndrome. Mean age of patients having essential hypertension was  $30.97 \pm 7.13$  years, whereas those with primary hyperaldosteronism was  $29.25 \pm 7.1$  years. Mean serum sodium was  $137.8 \pm 6.5$  mmol/l and potassium was  $4.23 \pm 0.6$  mmol/l. Mean systolic blood pressure of patients measured in OPD was  $172.7 \pm 19.2$  mm of Hg whereas diastolic blood pressure was  $100.0 \pm 8.3$  mm of Hg. Mean systolic blood pressure measured in Endocrine Clinic AFIP was  $142.7 \pm 10.5$  mm of Hg and diastolic blood pressure was  $90.3 \pm 6.5$  mm of Hg. Diastolic blood pressure was significantly higher ( $p = 0.001$ ) among all the patients reported in OPD. No statistically significant association was found between age, systolic and diastolic blood pressure ( $p < 0.05$ ) in either OPD or endocrine clinic. Therefore, it was concluded that hypertension is not uncommon in young population of Pakistan. Primary hyperaldosteronism as compared to other RAAS disorders, remains the leading cause of hypertension in young population.

### Biography

Mehwish Gilani has completed his MBBS from Army Medical College Rawalpindi, National University of Sciences & Technology in 2009. Currently, he is undergoing FCPS part II training in Chemical Pathology in Armed Forces Institute of Pathology, Rawalpindi. He is actively involved in research projects and two more projects are in the pipeline.

drmehwishgilani@hotmail.com

### Notes: