



Morning Blood Pressure Surge (MBPS) And Left Ventricular Hypertrophy in Autosomal Dominant Polycystic Kidney Disease(ADPKD): A Cross Sectional Study

Saim Sağ¹, Abdulmecit Yıldız², Ayşegül Oruç², Yavuz Ayar², Alparslan Ersoy²

1 Uludağ University Faculty of Medicine, Department of Cardiology, Bursa, TURKEY

2 Uludağ University Faculty of Medicine, Department of Nephrology, Bursa, TURKEY

INTRODUCTION AND AIMS

A lot of studies showed a significant association between ambulatory blood pressure and left ventricular mass index (LVMI) in patients with ADPKD, furthermore prior to hypertension and impaired kidney function, left ventricular hypertrophy have been reported in these patients but no study have sought relation between LVMI and MPBS in ADPKD patients

METHODS

Ambulatory blood pressure monitoring was performed in 31 patients with normal kidney function and normotensive ADPKD patients and 35 age and sex matched controls. Left ventricular dimensions were estimated by echo-cardiography. The MBPS was calculated in 2 ways: sleep-trough MBPS, defined as the morning SBP minus the lowest SBP, and prewaking MBPS, defined as the morning SBP minus the preawake SBP.

RESULTS

Demographic and clinical characteristics of patients were normal between groups but MBS and LVMI were prominent in patients with ADPKD with preserved kidney function.

In the ADPKD patients, LVMI correlated positively with MBS1($r: 0.416$, $p = 0.018$) and MBPS2 ($r:0,428$, $p=0,015$). In control group there were no relation between LVMI and MBS1 ,MBS2 ($r: 0.092$, $p = 0.601$, $r: 0.141$, $p = 0.419$) respectively.

CONCLUSIONS

Increased LVMI is associated with worse renal and patient outcomes in these patients MBPS may be a better marker of left ventricular hypertrophy than other factor in normotensive ADPKD patients with well-preserved kidney function. Reduction of the MBPS may be a new therapeutic target for preventing target organ damage and subsequent cardiovascular events in ADPKD patients.

