

## Hypertension and Improved left ventricular mass index in children after renal transplantation

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### Introduction:

Hypertension and left ventricular hypertrophy (LVH) are observed in most children with end-stage renal disease (ESRD). The aim of this study was to evaluate LVH in patients with ESRD on dialysis and to compare after renal transplantation, and to evaluate the impact of BP parameters on LVH.

### Methods:

The study comprised 39 patients with renal transplantation (21 M, 18 F; mean age  $14.54 \pm 4.42$  years). Medical records were reviewed for demographic features; casual blood pressure (BP) measurements, and echocardiographic evaluation were applied to all patients before and 6-9 months after renal transplantation.

### Results:

The mean Left ventricular mass index (LVMI) of patients before transplantation was  $50.18 \pm 16.94 \text{ g/m}^{2.7}$ , and 25 (64%) patients had LVH. The mean LVMI of patients after transplantation was  $33.52 \pm 7.94 \text{ g/m}^{2.7}$ , and 14 (36%) patients had LVH. The mean LVMI of patients before transplantation was significantly higher in patients than in the after transplantation ( $p < 0.001$ ). The mean Systolic BP (41 %) was  $123.84 \pm 11.59 \text{ mmHg}$  and the mean diastolic BP (59 %) was  $78.20 \pm 9.31 \text{ mmHg}$  in the patients before renal transplantation. After renal transplantation; The mean Systolic BP (36 %) was  $117.10 \pm 14.07 \text{ mmHg}$  and the mean diastolic BP (51%) was  $73.73 \pm 8.72 \text{ mmHg}$ . The mean systolic BP and mean diastolic BP were not significantly different before and after renal transplantation period.

### Conclusion:

LVH in children with ESRD is potentially reversible after renal transplantation, but hypertension may be permanent. There are several factors contributing to the development of hypertension in patients with ESRD; thus, it is possible that we did not fully control for all factors.