Susrunent & eonehuion

The present study was designed to evaluate cardiac changes in 30 patients with the end stage renal failure They were divided into group 1 (20 patients under conservative treatment) and group 2 (10 patients under peritoneal dialysis) . Their age ranged from 5-13 of patchable age and sex .

Fifteen healthy children were taken as control. All patients were subjected to full history, clinical examination ,x-ray chest ,ECG and laboratory investigations, urinalysis ,Hb % ,blood urea , serum creatinine and blood PH & baseline echocardiography by M-mode, two dimensional and pulsed Doppler. Continuos Doppler and color flow mapping were performed to all patients and control .

Increased cardiothoracic ratio by x- ray was found in 20 % of patients (6 pt.), a left ventricular hypertrophy (LVH) by voltage critira was detected in 26.6 % of patients (8 pt.) .Echocardiographic detection of LVH were observed 12 patients in G1 (60%) and in 8 patients (80%) in G2 The LVH affected IVS in 5 patients (25%) in G1 and 4 patients in G2 (40%). Pericarditis with effusion(minimal effusion) was present in 1 patient(3.3 %). There is a significant difference in stroke index between G1 &G2 which increase inG2. There was an association between the serum creatinine and duration of renal failure with the left ventricular mass and mass index present in G2.

Hypertension was present in 12 pt inG1 (60%) and in 9 pt. in G2 (90%). There is a correlation between the blood pressure and LVM&LVM index. Evidences of left ventricular systolic dysfunction

was present in 2pt (10%) inG1 and in I pt in G2 (10%) the diastolic dysfunction was present in8 pt in GI (40%) and in 5pt in G2(50%)

Left ventricular ejection time decreased in 10 patients in GI (50%) and in 8 pt (80%) inG2. There is an association between the decrease of LVET and the hypertensive left ventricular hypertrophy.

The main cause of renal disease was by post glomerulonephrtis in 12 pt. (60%) in 01. And 5 pt. in G2 (50%) and renal stone in GI (25%) & in G2 (30%) .

- Congenital renal disease was (10%) in GI & (20%) in G2 .
- Nephrocalcenosis 5% in GI only .

In conclusion, this study demonstrated high incidences of cardiac changes in children with ESRF. Echocardiography must be performed for early detection of these abnormalities, as many of these changes were unsuspected clinically or by the use of chest x-ray or ECG. In these patients there was progressive reduction of E/A ratio so these patients should be examined regularly to control cardiac complications that accompanied ESRF