**TITLE:**

**STUDY ON ECHOCARDIOGRAPHIC PARAMETERS OF LEFT VENTRICULAR DYSFUNCTION BEFORE AND AFTER INITIATION OF MAINTENANCE HEMODIALYSIS IN END-STAGE KIDNEY DISEASE PATIENTS**

**ABSTRACT**

**Background:**

Chronic kidney disease (CKD) is a global health issue, resulting in approximately one million fatalities annually. Cardiovascular complications continue to be a significant contributor to mortality, and this was a study conducted to assess the changes and risk reduction of cardiovascular complications after initiating maintenance hemodialysis.

**Objective of the study**:

To study echocardiographic changes before and after initiation of dialysis in ESKD patients with a simple non-invasive bed-side assessment of 2D Transthoracic Echocardiography (TTE).

**Methodology**:

It was a cross-sectional observational study. All the patients included in the study either attended the out-patient department or were admitted at Sri Ramachandra Institute of higher education and research, over a period of 3 months. The study included patients aged >18 years who had given written consent and fulfilled the KDIGO (Kidney diseases improving global outcomes) criteria of CKD stage 5 requiring hemodialysis initiation.

**Results**:

A total number of 57 patients were included in the study. The mean age was 46 ± 10 years. Among co-morbidities, 53 patients (93%) were hypertensive and 44 patients (77.2%) also had diabetes mellitus. The mean LVIDs (Left ventricular end systolic diameter) was 32±3mm (pre-HD initiation) as compared to 31±3.3mm 3 months post-HD(hemodialysis) initiation. The mean EF (ejection fraction) pre-HD was 42% and 48% after 3 months of HD.

**Conclusion :**

We advocate for a two-fold approach. Firstly, we recommend that all end-stage renal disease patients undergo an echocardiogram screening before commencing dialysis. Secondly, we propose that these patients should be re-evaluated after receiving adequate hemodialysis.