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Cardiovascular parameters and biomarkers for predicting mortality in dialysis dependent CKD patients.

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Objectives: Primary objective : To study echocardiography and electrocardiography parameters and their correlation with mortality in dialysis dependent CKD patients
Secondary objective: To study cardiac biomarkers and their correlation with mortality.

Methods: Prospective observational study
sample size : 92

Patients ECG and 2D echo was done and blood samples were taken for cardiac biomarkers.
Data was analysed by SPSS VERSION 23

Results: Total percentage of male is 63%,mean age of patients was 36.4 ± 14.022 years,mean dialysis vintage 7.95 ± 6.606 months. Mean NT-Pro BNP in survivors were 13258 ± 6847.84 pg/ml and in non survivors were 20146.20 ± 15753.60 pg/ml ($P = 0.006$). Mean LVMI was 167.19 ± 61.847 and mean RWT was 0.51 ± 0.105 ,mean QTc interval was 452.84 ± 61.847 mv,mean frontal plane QRS-T angle was 49.06 ± 44.055 degree, mean Sokolov Lyon criteria was 3.43 ± 1.249 mv.
LVMI > 107.2 g/m² will predict mortality with sensitivity of 88.2% ,specificity of 22.0%.
CK-MB > 4.8 IU/L predicts mortality with p value = 0.03 (within month),sensitivity and specificity of 29.4 and 61.0% respectively.NT-Pro BNP with score > 9642.9 pg/ml has sensitivity of 68.6% and specificity of 36.6%.

Conclusions: In this study we found that there is evidence of NT-Pro BNP and LVMI and frontal plane QRS-T angle acting as independent markers for prediction of mortality in CKD patients on hemodialysis. LVMI score of > 107.2 g/m² will predict mortality with sensitivity of 88.2% and specificity of 22.0%. CK-MB > 4.8 iu/l has immediate mortality with specificity of 61%.