CARDIOVASCULAR RISKFACTORS ANALYSIS IN RENAL TRANSPLANT RECIPIENTS

BACKGROUND: Renal transplantation is currently the preferred treatment modality for virtually all suitable candidates with end-stage renal disease. When compared with the general population, cardiovascular mortality in transplant recipients is increased by nearly 10-fold among patients within the age range of 35 and 44 and at least doubled among those between the ages of 55 and 64. All transplant recipients should currently be considered as coronary heart disease risk.

AIM: This study was designed to evaluate the relationship between conventional assessment of the global cardio-vascular risk by means of the Framingham risk score and traditional, non-traditional risk factors.

MATERIALS AND METHODS : Retrospective Analytical study was done in our center to analyze cardiovascular risk factors in Cadaver and Live related renal transplant recipients over the period of October 2010 to November 2011. Less than one month post transplant , less than 18 years of age, death due to non cardiac causes during the study, graft dysfunction and on maintenance hemodialysis were exclude from the study. All recipients profile of Age, Sex, Nature of the Donor, Post transplant duration in months were noted. Height and weight were measured. Body mass index was calculated. Waist circumference and Blood pressure were measured. Fasting and 2 hours postprandial blood were taken to analyze Sugar, Creatinine, Total Cholesterol, HDL,LDL, Triglycerides, Hemoglobin, Serum albumin, Serum uricacid. Urine routine was done by dipstick method. Cardiac ECHO evaluation was done. Carotid intima media thickness was measured. Framingham risk score was determined by online calculator. The statistical analysis had been done by using SPSS (Statistical Package on Social Science) version 15.0 . Pearson's exact Chi-square was used to calculate p-Value. A p value of < 0.05 was

considered statistically significant. Multi variate analysis was done by multiple logistic regression method.

RESULTS: Total numbers of recipients were 170, among124 were male, 46 were female. live donor transplant was 142, cadaver transplant was 28.Mean age was 32.7years,Mean post transplant duration was 53.7months. Total patients were divided into groups according to framingham risk score to predict 10 year absolute risk of coronary heart disease event.

Recipients were fit into risk category of 1-3%, 3-5%, 5-8%, 8-10% with prevalence of 80.6%, 11.8%, 4.7%, 2.9% respectively. Framingham risk score was compared with recipient's variables to compute p-Value as follow:

FRAMINGHAM RISK SCORE	p-Value
Age above 40 years	0.001
Sex	0.893
Cadaveric graft recipients	0.026
Post transplant duration in months	0.273
Graft dysfunction	0.458
Body mass index	0.120
Metabolic syndrome	0.001
NODAT	0.001
SHT	0.496
Diastolic dysfunction	0.001

Left ventricular hypertrophy	0.243
Lipid profile abnormalities	0.001
Proteinuria	0.001
Anemia and Post transplant erythrocytosis	0.014
Hypoalbuminemia	0.679
Hyperuricemia	0.481
Carotid intima media thickness ≥ 1.1mm	0.001

CONCLUSION: According to Univariate analysis following variables concluded as cardiovascular risk factors were Increased age, Cadaveric graft recipients, Metabolic syndrome, New onset diabetes after transplantation, Elevated serum cholesterol, Elevated LDL cholesterol,

Elevated TGL cholesterol, Diastolic dysfunction, Proteinuria, Anemia, Post transplant erythrocytosis and High carotid intima media thickness. Independent risk factors derived from multivariate analysis were Increasing age,New onset diabetes after transplantation, Elevated serum cholesterol, Proteinuria. All transplant recipients should currently be considered as coronary heart disease risk.