INFLUENCE OF PRE-TRANSPLANT CHRONIC KIDNEY DISEASE ON OUTCOMES OF ADULT HEART TRANSPLANT-ONLY RECIPIENTS: UNOS REGISTRY ANALYSIS

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Purpose: Renal dysfunction severity is considered for heart transplant (HT) candidacy. However, acceptable level of dysfunction is not well defined. The influence of Chronic Kidney Disease (CKD) stage on post-HT outcomes is unknown.

Methods: 30437 HT patients (pts) were identified from UNOS (1987-2011) & stratified by CKD stage using the MDRD formula. Exclusions (42%):<18y, multiorgan & re-HT, & follow up (FU) loss. Survival was censored at 12y. Multivariate Cox proportional hazard regression models were adjusted for age, sex, diabetes, race, ischemic time, dialysis, life support, wait time & HLA mismatch.

Results: CKD stage 2 (39%) & 3 (36%) were most prevalent (CKD 1 (19%), 4 (3%) and 5 (3%)). Ischemic etiology was most prevalent in CKD 2-5 (47, 52, 48 & 46%, respectively), while dilated (53%) was most prevalent in CKD 1. FU began at time of HT (65 ± 57 months). 12516 died (35, 39, 44, 55 & 59% for CKD 1-5 respectively). Crude survival is shown (Figure). Unadjusted HR (CI) for all-cause mortality (compared to CKD 1): CKD 2 [0.99 (0.94-1.04)**], CKD 3 [1.22 (1.16-1.29)*]; CKD 4 [1.68 (1.52-1.86)*]; CKD 5 [2.03 (1.82-2.26)*]. After adjustment: CKD 2 [0.98 (0.92-1.04)**]; CKD 3 [1.21 (1.14-1.29)*]; CKD 4 [1.63 (1.44-1.83)*]; CKD 5 [1.84 (1.50-2.26)*].

Conclusion: CKD stage is an independent predictor post HT mortality. Mild CKD pts have similar outcomes to pts with normal function, while CKD 3-5 have significantly worse outcomes. Further study is warranted to understand causative mechanisms.

*p < 0.0001; **p=NS