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## Heart Failure and Cardiomyopathies

### INCREMENTAL BENEFITS OF HEMODIALYSIS ON LEFT VENTRICULAR SYSTOLIC FUNCTION IN PATIENTS WITH CHRONIC SYSTOLIC HEART FAILURE AND ADVANCED CHRONIC KIDNEY DISEASE

Poster Contributions

Hall C

Sunday, March 30, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Approaches to Advanced Heart Failure: From VAD, Transplant, Palliative Care to New Percutaneous Therapies

Abstract Category: 12. Heart Failure and Cardiomyopathies: Clinical

Presentation Number: 1221-199

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**Background:** Effect of initiation of hemodialysis (HD) on left ventricular ejection fraction (LVEF) in patients with chronic systolic heart failure and advanced chronic kidney disease (CKD) is unknown. We present data on patients with reduced LVEF undergoing hemodialysis at our institution.

**Methods:** Data on demographics, diagnosis, medications, hemodialysis and echocardiography was collected in 53 patients with reduced LVEF undergoing HD at our institution between 2003 and 2013. LVEF prior to initiation of HD was compared to the LVEF after initiation of HD. Analysis was stratified according to pre-HD LVEF and etiology of chronic heart failure.

**Results:** Mean ( $\pm$  SD) age was  $53 \pm 16$  years and there were higher proportion of males (66%), non-Hispanic Black (88%), those with history of diabetes mellitus (53%) and hypertension (94%). There was a significant increase in the mean ( $\pm$  SD) LVEF after initiation of HD when compared to pre-HD LVEF ( $36.3 \pm 18.1$  vs.  $30 \pm 11.1$ ,  $p < 0.0001$ ). Greatest benefit of improvement in LV EF was seen in those patients who had no history of coronary artery disease ( $47.6$  vs.  $35.0$ ,  $p < 0.010$ ). The change in LV EF was similar across different subgroups of baseline LV EF ( $\leq 20\%$ ,  $21-30\%$ ,  $31-40\%$  and  $41-50\%$ ,  $p = 0.77$ ). The mean ( $\pm$ SD) duration between echocardiographic studies pre- and post-initiation of HD was  $9 \pm 9$  months. In this cohort, 78% of patients were on beta-blockers, 65% on ACEI and 35% on Hydralazine/nitrate therapy. There was no significant interaction between the change in LVEF and drug therapy ( $p = 0.31$ ).

**Conclusion:** We demonstrated an improvement in LVEF in patients with systolic heart failure and CKD after initiation of HD therapy. Earlier initiation of HD in these patients might lead to improve clinical outcomes and this needs further studies.