ACC.11
60th Annual Scientific Session & Expo

E805
JACC April 5, 2011
Volume 57, Issue 14

IMAGING AND DIAGNOSTIC TESTING

CLINICAL PREDICTORS OF LEFT VENTRICULAR MASS REGRESSION IN PATIENTS WITH CHRONIC KIDNEY DISEASE FOLLOWING RENAL TRANSPLANTATION

ACC Poster Contributions
Ernest N. Morial Convention Center, Hall F
Monday, April 04, 2011, 3:30 p.m.-4:45 p.m.

Session Title: Echocardiographic Insights To Disease Mechanisms
Abstract Category: 31. General Echocardiography: TTE
Session-Poster Board Number: 1126-217

Authors: *Omkar U. Vaidya, Tina Coggins, Anwita Vaidya, Harshal Patil, John House, Ahmed Awad, Michael Main, Saint Luke's Mid America Heart Institute, Kansas City, MO*

Background: Chronic kidney disease is associated with increased left ventricular mass. There is little data regarding the long term effect of renal transplantation on left ventricular mass regression, and no data describing clinical factors associated with LV mass regression in this patient population.

Methods: Patients with at least 1 year of documented chronic kidney disease followed by successful renal transplantation were identified using the Saint Luke's Hospital database. All patients underwent echocardiography at least 6 months prior to transplant (baseline echocardiogram) with repeat echocardiography at least 1 year post transplant (follow-up echocardiogram). An experienced echocardiographer performed all linear measurements in the parasternal long axis projection including systolic and diastolic LV chamber dimensions and LV wall thickness. LV mass was calculated as LV mass = 0.8 x {1.04[(LVIDd + PWTd + SWTd)3 - (LVIDd)3]} + 0.6g. Candidate clinical variables including age, gender, race, donor type, duration of dialysis, antihypertensive medication, insulin use, statin use, and antirejection medications were assessed. Patients were grouped into tertiles based on extent of LV mass regression at follow-up (Tertiles 1 and 2=regression group, Tertile 3=no regression group).

Results: A total of 111 patients (mean age 56 years, 63 men) were included in the study with a mean follow-up (transplant to follow-up echocardiogram) =1.7 years. Seventy-four patients had significant LV mass regression (- 27.1 g/m^2) while 37 patients had no significant regression (-11.0 g/m^2). Statin medication use was associated with LV mass regression (RR=3.96, CI 1.09-14.44). No other clinical variable was associated with LV mass regression.

Conclusion: Significant LV mass regression is present on long term follow-up in patients with chronic kidney disease undergoing renal transplant. Statin medication use is the only clinical factor associated with regression in this patient population.