Non Invasive Imaging (Echocardiography, Nuclear, PET, MR and CT)

PROGNOSTIC VALUE OF DOBUTAMINE STRESS ECHOCARDIOGRAPHY IN RENAL TRANSPLANT CANDIDATES: A META-ANALYSIS

Poster Contributions
Poster Hall B1
Monday, March 16, 2015, 9:45 a.m.-10:30 a.m.

Session Title: Non Invasive Imaging: Advances in Clinical Non-Invasive Imaging
Abstract Category: 17. Non Invasive Imaging: Echo
Presentation Number: 1243-028

Authors: Yugandhar R. Manda, Jamshid Shirani, St. Luke’s University Health Network, Bethlehem, PA, USA

Background: Coronary artery disease (CAD) is a major cause of death in patients with end-stage renal disease (ESRD) awaiting renal transplantation (RT). Invasive angiography is often avoided due to risk of worsening renal function. Dobutamine stress echocardiography (DSE) has been used for initial evaluation of such patients. However, there is insufficient data regarding the prognostic significance of DSE in this setting.

Methods: Electronic databases (MEDLINE, EMBASE and COCHRANE) were searched from inception to June 2014 with the MESH terms RT, DSE, prognosis and end-stage renal disease (ESRD). Studies were included if they reported on major adverse cardiovascular events (MACE) in patients with ESRD being assessed for RT.

Results: Five observational studies including 428 patients were identified (including 1233.3 patient years of follow up). According to the pooled analysis, positive DSE in patients evaluated for RT was associated with a significant increase in MACE (odds ratio (OR) = 3.27 (95% confidence interval (CI) 1.91-5.58, p<0.001) [Figure 1a]. In addition, risk of cardiac death (CD) and myocardial infarction (MI) with a positive DSE was also increased compared to negative DSE result (OR = 4.20 (95% CI 1.9-9.2), p< 0.001) as reported in 4 of the 5 studies (n=335, patient years of follow up=1032) [Figure 1b].

Conclusion: Patients with positive DSE had an increased risk of MACE as well as CD and MI during follow up. DSE can be effectively used for risk stratification of patients with ESRD awaiting RT.