**INITIAL INTRAVASCULAR ULTRASOUND IN THE EVALUATION OF CARDIAC TRANSPLANT VASCULOPATHY WITHOUT A ROUTINE EARLY BASELINE STUDY HAS PROGNOSTIC VALVE**

R. Arsanjani1, M. Hashemzadeh2, **M. Movahed**3

1Mayo Clinic, Scottsdale, AZ, USA

2Univesity of Arizona, Tucson, AZ, USA

3CareMore and University of Arizona, Tucson, AZ, USA

**Background:**Abnormal minimal intimal thickening (MIT) on Intravascular ultraousnd (IVUS) defined as difference of > 0.5 mm between baseline and one-year post-transplantation has been shown to have prognostic value. We evaluated whether performing first IVUS more than 6 months after transplantation without a baseline IVUS study has similar prognostic value. Furthermore, we evaluated the prognostic effect of serial IVUS performed beyond one year.

**Methods:**A cohort of 149 cardiac transplant patients who underwent IVUS examination more than 6 months post-transplant were evaluated retrospectively. Of these 149 patients, 109 patients underwent a subsequent IVUS study approximately 1 year following the initial study. MIT values of > 0.5 mm without an early baseline study were correlated with major adverse cardiac event (MACE).

**Results:**The all-cause mortality was 4.7% (5/107) in patients with MIT of < 0.5 mm vs. 14.6% (6/41) in patients with MIT of > 0.5 mm [Hazards ratio (HR): 3.2; 95% confidence interval (CI): 1.002-12.17; p = 0.039]. The overall MACE rate was 8.4% (9/107) in patients with MIT of < 0.5 mm vs. 24.4% (10/41) in patients with MIT of > 0.5 mm [HR: 6.7; 95% CI: 1.30-9.42; p = 0.009]. After adjusting for age, abnormal MIT remained a significant independent predictor of MACE (HR: 3.93; CI 1.21-12.81; p=0.023).

**Conclusions:**The presence of abnormal MIT noted on IVUS performed after 6 months post transplantation without a routine baseline IVUS carries important prognostic value. However, serial IVUS studies after first study appear to provide no further prognostic value.