PREDICTORS OF LONG-TERM OUTCOMES IN PATIENTS WITH MODERATE-SEVERE AND SEVERE MYXOMATOUS MITRAL REGURGITATION UNDERGOING EXERCISE ECHOCARDIOGRAPHY

Moderated Poster Contributions
Poster Sessions, Expo North
Saturday, March 09, 2013, 10:00 a.m.-10:45 a.m.

Session Title: Valvular Heart Disease: Clinical II - Mitral Valve
Abstract Category: 31. Valvular Heart Disease: Clinical
Presentation Number: 1112M-84

Authors: Peyman Naji, Fadi Asfahan, Tyler Barr, Richard Grimm, A. Gillinov, L. Leonardo Rodriguez, Tomislav Mihaljevic, Brian Griffin, Milind Desai, Cleveland Clinic Foundation, Cleveland, OH, USA

Background: In organic mitral regurgitation (MR), exercise echocardiography (ExEc) aids in symptom evaluation & timing of surgery. We sought to assess predictors of long-term outcomes in patients with myxomatous MR undergoing ExEc.

Methods: We studied 884 consecutive patients (58±13 years, 67% men) with ≥ 3+ myxomatous MR (excluding prior valve surgery, functional & other causes) undergoing ExEc. Clinical data was recorded. Echocardiographic [degree of MR, left ventricular (LV) ejection fraction, indexed LV dimensions, right ventricular systolic pressure (RVSP)] & exercise variables [metabolic equivalents (METs), heart rate recovery (HRR) at 1st minute post-exercise] were recorded. Composite events of death, myocardial infarction & stroke were recorded.

Results: Mean LV ejection fraction, indexed LV end-systolic dimension, rest RVSP, peak-stress RVSP, METs achieved, % age/gender-predicted METS & HRR were 58±5%, 1.6 ± 0.4 mm/m2, 31±12 mm Hg, 46±16 mm Hg, 9.6±3 & 33±14 beats, respectively. During 6.5±3 years of follow-up, there were 58 events. Cox survival analysis is shown in Figure. Patients achieving >100 % of predicted METs had 0.7 %/year event rate, vs. 1.4%/year in those achieving 85-100% & 2.1 %/year in those achieving < 85 % (log rank p-value < 0.001).

Conclusion: In patients with myxomatous MR undergoing ExEc, atrial fibrillation, lower achieved age/gender predicted METS & lower HRR were associated with worse outcomes. Patients with >100 % predicted METs had excellent long-term outcomes.