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

PROGNOSTIC VALUE OF DOBUTAMINE STRESS MYOCARDIAL CONTRAST PERFUSION ECHOCARDIOGRAPHY IN TYPE 2 DIABETES MELLITUS

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

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Authors: *Runqing Huang, Sahar S. Abdelmoneim, Lara F. Nholo, Amy L. Dichak, Susan J. Eifert Rain, Sharon L. Mulvagh, Mayo Clinic, Rochester, MN, USA***Background:** We sought to determine the prognostic value of dobutamine stress (DSE) real time myocardial perfusion echocardiography (RTMPE) to predict outcome of Type 2 Diabetes Mellitus (T2DM) patients with known or suspected coronary artery disease.**Methods:** 268 consecutive T2DM patients with DSE-RTMPE were prospectively followed for a mean of 3.0 (range: 1.3-5.5) years. Visual assessments of myocardial perfusion (MP) and wall motion score index (WMSI) during DSE (17-segments) were graded independently (normal vs. abnormal). Patients were followed for cardiovascular events (CE).**Results:** Feasibilities of WMSI and MP interpretations were 100%, and 74%. Follow-up was achieved in 178 patients (age: 70±10, 61% male). WMSI and MP were interpreted as normal in 142, 105 (79%, 58%) and abnormal in 36, 73 (21%, 42%) patients, respectively. CE occurred in 55 (31%): 18 deaths; 5 non-ST-elevation myocardial infarctions; 11 unstable angina; 2 CABG; 9 PCI; 2 CHF; 8 stroke. Figure 1 shows Kaplan-Meier CE-free survival for WMSI and MP, alone and combined. In multivariate analysis, abnormal WMSI and MP were independent predictors of CE after adjustment for gender, age, HbA1c, and risk factors [OR (95% CI): 4.64 (1.66-13.7), p=0.003; 4.08 (1.70-10.39), p=0.001, respectively].**Conclusion:** RTMPE during DSE provides powerful prognostic information that is superior to clinical variables for prediction of cardiovascular events in T2DM.

Figure 1-a. Kaplan-Meier survival curve for WMSI and MP combined

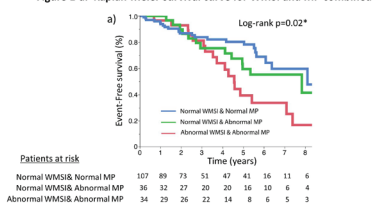


Figure 1-b. Kaplan-Meier survival curve for MP and WMSI alone

