Factors determining outcome in patients with heart failure and normal ejection fraction

Ms. Caroline 6409 Tufaro caroline.tufaro@meduniwien.ac.at ¹, Prof. Dr Julia 6410 Mascherbauer julia.mascherbauer@meduniwien.ac.at MD ¹, Dr. Beatrice 6411 Marzluf beatrice.marzluf@meduniwien.ac.at MD ¹, Prof. Dr Thomas 6412 Binder thomas.binder@meduniwien.ac.at MD ¹, Prof. Dr Irene 6413 Lang irene.lang@meduniwien.ac.at MD ¹ and Prof. Dr Diana 6414 Bonderman diana.bonderman@meduniwien.ac.at MD ¹. ¹ Department of Internal Medicine II, Division of Cardiology, Medical University Vienna, Austria.

Body: Background: Patients with heart failure and normal left ventricular ejection fraction (HFNEF) face an adverse outcome. Our aim was to identify factors that determine prognosis. Methods: Patients diagnosed according to current ESC guidelines were recruited. Death and/or hospitalization for HF were defined as primary outcome variables. Outcome groups were compared with respect to potential prognostic predictors using the t-test. Multivariable logistic regression analysis determined whether parameters of interest were associated with adverse outcome. P<0.05 indicated statistical significance. Results: Between December 2010 and January 2012, 49 patients (34 f/ 15 m, mean age 70±8 years) were registered. After a mean follow-up of 5±9 months, 14 (29%) patients were hospitalized or died. The adverse outcome group was characterized by higher body mass index (BMI, 35±7 versus 29±5, p=0.004), higher systolic pulmonary pressure on echo (sPAP in mmHg, 69±15 versus 55±14, p=0.004), shorter 6-minute walk distance (6-MWD in m, 271±131 versus 364±100, p=0.019), higher transpulmonary gradient (TPG in mmHg, 15±4 versus 12±4, p=0.013) and a higher pulmonary vascular resistance (PVR in dynes.s/cm², 257±97 versus 198±71, p=0.030). Diabetes mellitus II (DM II, 75% versus 24%, p=0.002) and atrial fibrillation (92% versus 51%, p=0.013) were more prevalent among patients with adverse outcome. In the multivariable regression model, only DM II (OR 25.34[95% CI, 2.06 to 311.45]; p=0.012), BMI (OR 1.25[95% CI, 1.00 to 1.56]; p=0.048), and PVR (OR 1.02[95% CI, 1.00 to 1.05]; p=0.032) remained independent predictors of outcome. Conclusions: Presence of DM II, higher BMI and higher PVR worsen prognosis in HFNEF patients.