Type 2 Diabetes and Congestive Heart Failure are Mutually Independent Predictors of the Presence of Albuminuria

M. MAECHLER1,2, A. VON BANK1,2, B. LARCHER1,2, A. MADER1,2, L. SPRENGER1,2, B. MUTSCHLECHNER1,2, M. BENDA1,2,3, A. LEHERER1,2,4, A. MUENDLEIN1,2, H. DREXEL1,3,4, C.H. SAELY1,2,3

1 Vorarlberg Institute for Vascular Investigation and Treatment (VIVIT), Feldkirch, Austria; 2 Academic Teaching Hospital Feldkirch, Feldkirch, Austria; 3 Private University of the Principality of Liechtenstein, Trischen, Principality of Liechtenstein; 4 Medical Central Laboratories Feldkirch, Feldkirch, Austria; 5 Department of Medicine, County Hospital Bregenz, Austria; 6 Drexel University College of Medicine, Philadelphia, PA, USA.

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BACKGROUND
Albuminuria is a well-known characteristic of diabetic nephropathy and it is also present in a large portion of patients with congestive heart failure (CHF). However, it is not known how albuminuria associates with the presence of type 2 diabetes mellitus (T2DM) and CHF together. This issue therefore was addressed in the present study.

RESULTS
The prevalence of albuminuria was lowest in CHF-/T2DM- subjects (8.7%). When compared to this group it was significantly higher in CHF-/T2DM- (23.1%, p=0.010), CHF+/T2DM- (38.1%, p<0.001) and CHF+/T2DM+ patients (62.7%, p<0.001). It was highest in CHF+/T2DM+ patients, in whom it was higher than in CHF-/T2DM- (p<0.001) and in CHF+/T2DM- (p=0.001) patients; a trend towards a higher prevalence of albuminuria in CHF-/T2DM+ patients vs. CHF+/T2DM- patients did not reach statistical significance (p=0.093). In logistic regression analysis CHF and T2DM were mutually independent predictors of albuminuria, when adjusted for age, sex, body mass index, LDL cholesterol, history of smoking and hypertension, as well as use of statins and ACE inhibitors/angiotensin II receptor blockers (OR 2.57 [95% CI 1.47–4.51]; p=0.001 and OR 4.15 [2.18 – 7.88]; p<0.001, respectively).

CONCLUSION
We conclude that T2DM and CHF are mutually independent predictors of albuminuria.