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P5 Aortic Volume Wave Velocity (VWV) in Chronic Heart Failure (CHF) Measured During the 12 Channel Routine ECG by Impedance Plethysmography Relates Negatively to Appendicular Muscle Mass (AppMM)

Falko Skrabal, Johannes Boyer, Hasib Ehsas, Katharina Skrabal

Institute of Cardiovascular and Metabolic Medicine, Austria

ABSTRACT

Introduction: Pulse wave velocity or (or VWV) may relate to muscle mass and body fat. We have included measurements for the above in the routine 12 channel ECG.

Methods: A 12 channel ECG supplies impedance plethysmographic measurements at the four extremities at 40 kHz [1]. From these VWW was derived in analogy to carotid femoral PWV. Impedance measurements at 5, 40 and 400 kHz in six body segments are also provided [2]. From these AppMM and body fat were measured in 123 participants without diabetes and CHF and in 72 patients with CHF (NYHA class 2 to 4).

Results: In multiple backward stepwise regression analysis VWV was related positively to age, standardized systolic blood pressure [3] and negatively to AppMM index (total $r = 0.83$, $p < 0.001$) but not to body fat.

Discussion: The relation between VWV and the degree of sarcopenia in CHF reveals the importance of muscularity for aortic health.

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