Abstract: P692

Low Concordance Between the NYHA Class and Cardiopulmonary Exercise Test Variables in Heart Failure Patients

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Background: Peak oxygen consumption (VO2peak) evaluated by cardiopulmonary exercise test (CPET) is the gold standard to determine functional capacity, which is an important prognostic tool in heart failure (HF). However, subjective NYHA classification is most often used for this purpose. Also, VE/VCO2slope, Oxygen Uptake Efficiency Slope, heart rate recovery, PEtCO2 and their combination in CPET scores can be utilized.

PURPOSE: To analyze the agreement between NYHA classification with: Weber classes (VO2peak based); ventilatory classes - VC (VE/VCO2 based) and CPET score.

METHODS: HF patients who were submitted to CPET were classified accordingly to NYHA, Weber classes, VC and the CPET score. Kappa index was calculated for NYHA versus Weber, VC and CPET Score.

RESULTS: 219 patients, 74% male, mean age 56±14 years and mean ejection fraction 36.4±10.6%. HF etiology was Ischemic in 44%, followed by idiopathic in 23%. NYHA class I, II, III, IV distribution was: 32; 33, 33 and 2%, respectively. Mean VO2peak was 20±7 ml.kg⁻¹.min⁻¹and Mean VE/VCO2 Slope 40±12. The agreement between NYHA and Weber class was Kappa 0.267 (p<0.01); NYHA and VC Kappa -0.025 (p=0.503); NYHA and CPET score: Kappa 0.063 (p=0.212).

CONCLUSION: There was a low agreement between NYHA and Weber class and no agreement between NYHA and VC or the CPET score. Future studies with clinical follow up comparing each of these classifications are warranted.