CO06-005-e
Eccentric training in chronic heart failure: Feasibility and functional effects. Results of a comparative study

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Keywords: Chronic heart failure; Eccentric exercise; Rate of perceived exertion; Six-minute walk test

Objectives.—The positive effects of exercise training in chronic heart failure (CHF) have been demonstrated for concentric exercises (CON). However, eccentric training (ECC) could represent a valuable alternative to CON, thanks to its larger impact on muscle function, despite lower requirements for the eccentric training (ECC) could represent a valuable alternative to CON, thanks to its larger impact on muscle function, despite lower requirements for the eccentric training. Therefore, we decided to compare Acti’MET with the IPAQ questionnaire [2], which explores the same period. It will also be necessary to follow patients to assess the sensitivity to change of the calculator.

A second part of the study will explore the educational aspect of the tool and its impact on the practice of regular physical activity.

References
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The 6 minute walk test and before bariatric surgery: Which interest?

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Keywords: Obesity; Bariatric surgery; 6 minute walk test

Introduction.—Obesity is responsible of a decrease in the ability to walk. The 6 minute walk test (6MWT) is an easy test for the evaluation of the functional ability of patients with cardiac, respiratory diseases and it is highly reproducible in obese individuals [1].

Objective.—To evaluate the correlations between the markers of obesity and different parameters measured before and after a 6MWT.

Population.—One hundred and thirty-three patients (mean age 40.2 years) seen in a multidisciplinary evaluation before bariatric surgery. The mean Body Mass Index (BMI) was 48.5 kg/m², the mean waist circumference (WC) was 132 cm.

Methods.—All the patients have realised a 6MWT. Have been measured: the total distance, the percentage to the theoretical distance (%DT), the walk-work (WW), the SaO2, the frequence rate (FR), the blood pressure before and after the test, the relative cardiac cost (RCC), and the painfull articular score.

Results.—The distance was significantly and negatively correlated with the BMI (r = −0.5; P < 0.0001), the WC (r = −0.36; P < 0.0006), the articular score (r = −0.25; P < 0.01) and the kinésiophobie (P < 0.04). The speed, the SaO2 before and after the test were correlated negatively with the BMI. The RCC was correlated significantly with the distance, the % DT and the WW. The WW was different between the sex (P < 0.005) but the distance and % DT were not. A high diastolic pressure after the test was the only parameter associated to the Borg scale before and after the test (P < 0.01).

Conclusions.—The distance of the 6MWT is negatively correlated to the BMI. It implies that all the process that diminish the BMI have a potential impact on this parameter. Our study has found an association between the results of the 6MWT and the number of painful articular localisations but not with only gonarthrosis and kinesiophobia, factors that must be evaluated also in the post-surgical outcome. Finally, a high perception of effort (Borg’s scale) was only associated with the cardiac consequences of the test, in favor of a central origin.

Reference
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Impact of insulin resistance on muscle strength in obese women

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Keywords: Muscle strength; Obesity; Insulin sensibility; Isokinetic

Introduction.—Obesity is a public health problem that can induce alone or because of its comorbidities disabilities. The main metabolic complication of obesity is type 2 diabetes, characterized by insulin resistance. Studies show that this population has a poor muscle strength compared to a non-diabetic population and this deficit is associated with a higher insulin resistance index (HOMA) [2]. Peripheral muscle strength (flexion-extension of quadriceps) in pre-menopausal women is lower in obese women compared to lean women when correcting for fat-free mass [1]. The association between insulin resistance and muscle strength in this population should be studied, which has been suggested by theoretical estimate. In this study, we examined whether quadriceps muscle strength is reduced in relation to insulin resistance (HOMA) in well-functioning ambulatory non-diabetic obese women by a cross-sectional analysis.