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

Objectives.—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 (%D'T), the walk-work (WW), the SaO₂, the frequency rate (FR), the blood pressure before and after the test, the relative cardiac cost (RCC), and the painful 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 kinésiophobia (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 percentage of the distance, the % DT and the WW. The WW was different between the sex (P < 0.005) but the distance and the % DT were not.

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 only with 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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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.

References
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