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PREVALENCE OF SARCOPENIC OBESITY IN A SAMPLE OF OVERWEIGHT OR OBESE SUBJECTS: SCREENING BODY COMPOSITION PHENOTYPES FOR A PRECISION NUTRITION

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INTRODUCTION

Precision nutrition gathers genotype and phenotype data and is framed within 5P medicine[1]. Obesity is a complex multifactorial disease[2], which is defined, according to Gallagher D et al as a %FM≥30 (men) and ≥40% (women)[3]. Sarcopenia, a SMM disorder, characterized by a decrease in the quantity/quality/strength/fitness is associated with higher morbimortality[4] and is defined, according to EWGSOP, as ASMI<7 kg/m^2 (men) and <6 (women). BIA has been accepted to estimate ASMI[5]. Inbody 770 is a multifrecuency, octopolar, segmental BIA device, validated against a 4C-model to estimate FM[6] and 3C to estimate LM[7].

AIMS

Evaluate the prevalence of sarcopenic obesity by means of BIA, in a sample of patients who go to a Dietitian-Nutritionist (D-N) to lose weight.

MATERIAL AND METHODS

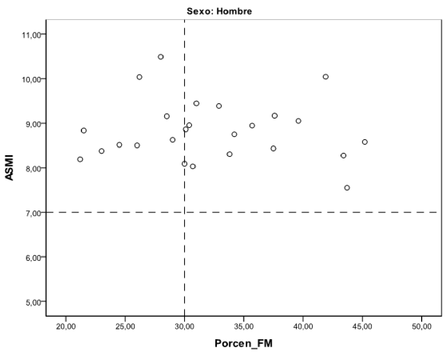
Cross-sectional study using a spanish sample of n=91 subjects (45±14 years; BMI=30±4,7 kg/m^2), made up of 66 women (46±14 years; BMI=29,6±4,95 kg/m^2) and 25 men (43±13 years; BMI=31,1±3,6 kg/m^2). Inclusion criteria were adults (>18 years old) of both sexes, measured in the first attendance, who aim to lose weight. The height was measured with a stadiometer SECA 220 (Seca Gmbh & Co. kg.) and the weight, %FM and LMra, LMla, LMrl and LMll with Inbody 770 (Inbody Ltd; Co. Seoul, Korea). The ASMI was calculated as [ΣASM=LMra+LMla+LMrl+LMll]/[T(m)]^2

RESULTS

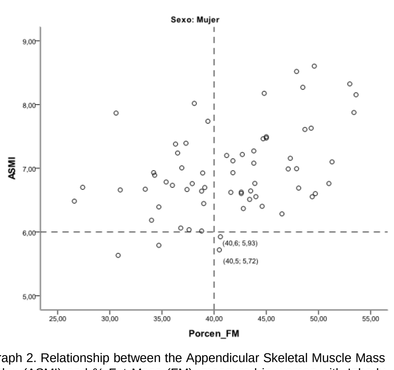
The average %FM and ASMI were 38,95±7,71 (men: 32,22±6,96; women: 41,5±6,36) and 7,47±1,08 kg/m^2 (men: 8,82±0,68; women:6,96±0,68). The prevalence of sarcopenic obesity was 2% (whole sample) and 3% (women: n=2; 53 and 68 years). No men presented sarcopenic obesity.

Variable (x±DE)	Men (n=25)	Women (n=66)	Total
Weight (Kg)	94,2±12,2	77,2±13,9	81,9±15,4
Height (m)	1,74±0,05	1,61±0,06	1,73±0,45
Age (años)	43±13	46±14	45±14
BMI (Kg/m2)	31,1±3,6	29,6±4,95	30±4,7
%FM	32,22±6,96	41,5±6,36	38,95±7,71
ASMI	8,82±0,68	6,96±0,68	7,47±1,08

Table 1: Main body composition variables (x±DE) distributed by sex and in the whole sample.



Graph 1. Relationship between the Appendicular Skeletal Muscle Mass Index (ASMI) and % Fat Mass (FM), measured in men with Inbody 770.



Graph 2. Relationship between the Appendicular Skeletal Muscle Mass Index (ASMI) and % Fat Mass (FM), measured in women.with Inbody 770

CONCLUSIONS

Sarcopenic obesity might be a more common finding in the population <60 years old, regarding that the age of one of the two women is below that threshold and the sample is small. Inbody 770 discriminates the subjects with sarcopenic obesity who could benefit from a precision nutrition in that disorder (0,4g protein/kg weight/meal)[8].

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