MON-P247
SARCOPENIC OBESITY OR PHASE ANGLE IN A COHORT OF PATIENTS WITH METABOLIC SYNDROME. WHICH IS BETTER PREDICTOR OF MUSCULAR STRENGTH, FUNCTIONALITY AND ACTIVITY LEVEL?
M. Torrego1,*, A. Barabash1, F. Cuesta2, L. Fernandez3, R. Cabrera4, M. Ceballos5, M. A. Rubio1, P. Matia1, U. Garin1.
1Endocrinology, 2Geriatrics, 3Endocrinology Laboratory, San Carlos Clinical Hospital, 4Health Care, Espronceda Center, 5Health Care, Lucero Center, Madrid, Spain

Rationale: Determine the phase angle (PA) and the prevalence of sarcopenic obesity (SO) in patients with metabolic syndrome (MS) and define associations with muscular strength, muscular function and level of physical activity.

Methods: Patients with MS. Body composition: Bodystat QuadScan 4000 and Akern BIA 101. Skeletal muscle mass (SMM): Janssen formula (0.401 x [height - cm²]/resistance - ohms) + (3.825 x gender - M = 1; F = 0) - (0.071 x age) + 5.102). SO: sum of low SMM/height² > 8.25 (M) and > 6.88 kg/m² (F), and high fat mass > 25.0 (M) and > 35.0% (F). Hand grip strength: JAMAR Plus dynamometer; dominant arm; mean of three determinations. Muscle function: chair test. Physical activity at three levels: RAPA1-Rapid Assessment of Physical Activity Questionnaire + chair test: Low Active, Moderately Active and Active.

Results: 124 patients, 49.2% M; 50.8% F. Median age 64 years (IQR: 61-69), median BMI 32.26 (IQR: 29.5-34.7). Prevalence of SO: 19.3%; Median PA: 5.43 (IQR: 4.85-5.95). PA was associated with grip strength (Rho Spearman 0.36; p = 0.001), chair test number of repetitions (Rho Spearman 0.263; p = 0.006) and level of activity (median values of 5.2 in low, 6 in medium and 4.95 in active; p = 0.002).

Conclusion: SO diagnostic and low PA are significantly associated with a lower muscular function. Low PA values are associated with lower functionality and level of physical activity.

Disclosure of Interest: None declared.

MON-P248
PREDICTION OF CHANGES IN THE VISCERAL FAT AREA AND THE SKELETAL MUSCLE MASS/VISCERAL FAT AREA RATIO DURING WEIGHT REDUCTION BY LIFESTYLE INTERVENTION
M. M. A. Abulmeaty1,2,*, M. Y. Berika3, A. M. Al-Othman4.
1Clinical Nutrition Program, Community Health Sciences, King Saud University, Riyadh, Saudi Arabia, 2Obesity Management and Research Unit, Medical Physiology Department, Zagazig University, Zagazig, Egypt, 3Rehabilitation Sciences Department, King Saud University, 4Clinical Nutrition Consultant and Head, Health and Nutrition Training Center, Riyadh, Saudi Arabia

Rationale: To predict the changes in the visceral fat area (VFA), skeletal muscle mass (SMM) and SMM/VFA ratio during weight loss in adult men with obesity.

Methods: A prospective study included eighty-two males, 20-60 years, for 3 months in the weight reduction clinic, KSU, between Sept, 2016 and Feb, 2017. Patients were instructed to follow a balanced hypocaloric diet (1200-1600 kcal/d, 50% complex carbohydrates, 30% unsaturated lipids, 20% protein), a physical activity plan for 60 min/d and a practical advice for combating the unhealthy lifestyle. Body mass index (BMI) was calculated as weight(kg)/height(m)². The InBody-720 bioelectric impedance was used to measure fat mass (FM), VFA, SMM/VFA ratio, and osseous mass (OM) before and after the study period. Percent of change in a given parameter (%) was calculated as before-after difference/before-value x 100. Stepwise regression analysis was used to test the predictors of changes in VFA and SMM/VFA ratio.

Results: A significant reduction in Wt, BMI, VFA and FM (p < 0.001), in addition to a significant rise of SMM/VFA ratio (p < 0.001), and an insignificant change of OM and SMM were detected. % Wt, BMI & VFA losses were 5.70%, 5.38%, & 13.59%, respectively, while % of rise in SMM/VFA ratio was 18.14%. % VFA loss was predicted by this equation: 3.245 + 1.92 x %BMI loss, (β = 0.668, r² = 0.447, p < 0.001). Additionally, %BMI loss significantly predict the rise in the SMM/VFA ratio (β = -0.588, r² = 0.346, p < 0.001) and the equation = -5.175-2.406 x %BMI loss.

Conclusion: The lifestyle intervention produced reduction in the VFA more than double that of the Wt or BMI with rise of SMM/VFA ratio and these changes could be predicted by %BMI loss.

Disclosure of Interest: None declared.

Reference