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O29

FOOD CREATINE AND HEALTH RISKS IN ELDERLY MEN AND WOMEN

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Rationale: No epidemiological studies so far evaluated the intake of creatine via regular diet in the elderly, neither the possible link between creatine consumption and risk of chronic medical conditions. We examined dietary intake of creatine in U.S. men and women aged 65 years and over, and evaluated the association between creatine intake and risk of self-reported medical conditions, and physical functioning/disability variables using data from the 2017-2018 National Health and Nutrition Examination Survey (NHANES).
Methods: Detailed dietary intake data from NHANES elderly was obtained by dietary interview component through a 24-hour dietary recall interview, with estimated individual values for total grams of creatine consumed per day for each respondent. A threshold for dietary intake of creatine used to calculate risk between creatine intake and medical conditions was set at 1.00 gram per day, with respondents were classified into two separate subpopulations: the suboptimal intake of creatine (< 1.00 g/day), and recommended intake (> 1.00 g/day). Relevant variables from Medical Conditions, Cardiovascular Disease and Health, Diabetes, Osteoporosis, Disability, and Physical Functioning questionnaires were identified from the NHANES 2017-2018 datasets.
Results: The NHANES 2017-2018 population included 1,500 participants aged 65 years and older, of which 1,221 individuals (627 men and 594 women) provided detailed dietary data via a dietary interview. Average creatine intake across all participants was 0.76 ± 0.79 grams per day (95% CI, from 0.72 to 0.81). As much as 70% of U.S. elderly consume less than 1.00 gram of creatine per day, with about 1 in 5 individuals (19.8%) consume no creatine at all. Elderly with the suboptimal intake of creatine were found to have 2.62 times higher risk of angina pectoris (adjusted OR = 2.62, 95% CI from 1.14 to 6.01, $P = 0.023$), and 2.59 times higher risk of liver conditions (adjusted OR = 2.59, 95% CI from 1.23 to 5.48, $P = 0.013$), compared to older counterparts who consume > 1.00 gram of creatine per day after controlling for demographic and nutritional variables.
Conclusion: A majority of U.S. elderly consume dietary creatine below the amounts recommended for adults, making creatine deficiency widespread in this sensitive population. The considerable shortage of dietary creatine is associated with an increased risk of heart and liver conditions, which calls for public measures that foster diets rich in creatine-containing foods, and additional research to investigate the role of creatine in age-related diseases.
Disclosure of Interest: None declared.

Best in Theme Session V - Nutritional assessment 1

O30

LOW THORACIC SKELETAL MUSCLE INDEX IS ASSOCIATED WITH NEGATIVE OUTCOMES IN 244 PATIENTS WITH COVID-19

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Rationale: Sarcopenia is associated with negative outcomes in critical acute conditions patients and during chronic diseases. We aimed to evaluate if low skeletal muscle index (SMI) measured at the thoracic level (T12) is associated with poor outcomes in hospitalized patients with COVID-19.
Methods: In this retrospective cohort study, we included all patients admitted to the hospital between March 1st and June 9, 2020, from the Emergency Department, with a confirmed diagnosis of COVID-19. SMI was assessed from a transverse computed tomography (CT) image at the T12 level. We analyzed the association between SMI and mortality, admissions in intensive care unit (ICU), infections, length of stay (LOS).
Results: We included 244 patients, median age was 62 (20-95) years, mean body mass index was 28,6 kg/m^2, and 34% were obese patients. 102 patients (41,8%) had low SMI. On multivariable analysis, low SMI was associated with more infections (OR=1,88 [1,06-2,98]), increased LOS (OR=1,87 [1,14-3,49]) and less ICU admissions, but not associated with mortality.
Conclusion: SMI measured by CT at the thoracic level T12 was associated with negative outcomes in patients with COVID-19.
Disclosure of Interest: None declared.

O31

EFFECT OF COVID-19 QUARANTINE ON WEIGHT LOSS EFFORTS OF HEALTHY SUBJECTS WITH OVERWEIGHT/OBESITY

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Rationale: The outbreak of the COVID-19 pandemic and the mandatory quarantine due to the unpredictable emergence of the viral disease have disrupted health care in multifaceted ways. The outcome of a dietary intervention based on the Mediterranean Diet (MD) to overweight and obese subjects during and after the quarantine period in Greece has been compared and potential differences have been observed.
Methods: Fifty apparently healthy overweight and obese adults participated in a 12-week dietary intervention conducted in two different time periods, during (phase I) and after (phase II) the lockdown in Greece (26 and 24 subjects, respectively). Volunteers in both phases received individualized guidance along with a weekly diet plan (caloric deficit of 20% of the daily energy requirements) and were asked not to change their exercise habits. A detailed clinical examination was performed, anthropometric characteristics and biochemical parameters were measured at the first and final session.
Results: Decreases in body weight, body fat mass and waist circumference were observed in both groups. Participants in phase II experienced a greater weight loss compared to phase I participants (7.5 ± 2.8 kg compared to 4.7 ± 2.6 kg, $p = 0.001$). A significantly larger decrease in body fat mass ($p = 0.019$) and waist circumference ($p < 0.001$) was also observed in phase II participants. Adherence to the MD was improved in both groups, however a trend towards a higher reduction in caloric intake and a significantly lower fat intake and less sedentary time spent weekly were observed in phase II subjects.
Conclusion: An energy-restricted intervention based on the MD during the COVID-19 lockdown led to a significant weight loss. However, once the lockdown was lifted, the same intervention was substantially more effective. This nationwide quarantine was associated with more fat intake and sedentary behavior and a trend towards higher energy intake.
Disclosure of Interest: None declared.

O32

CONCURRENT AND PREDICTIVE VALIDITY OF GLIM CRITERIA TO IDENTIFY UNDERNUTRITION IN HOSPITALIZED PATIENTS

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Rationale: Global Leadership Initiative on Malnutrition (GLIM) criteria were developed in order to reach a consensus regarding the diagnosis of undernutrition in clinical setting. The present study aims to assess the concurrent and the predictive validity of GLIM criteria in hospitalized patients, namely as a predictor for home discharge.
Methods: A prospective study was conducted among hospitalized patients aged ≥18 years. Nutritional risk was assessed with the Nutritional Risk Screening (NRS-2002) initial screening, within the first 72h after hospital admission. Patients were also evaluated with Patient-Generated Subjective Global Assessment (PG-SGA) and with GLIM criteria. Kappa (κ) statistics were applied to determine the degree of agreement between these latter tools. Sensitivity and specificity of GLIM criteria were calculated using PG-SGA as a reference. Cox regression analysis was used to estimate adjusted (marital status, Katz index, age) hazard ratios (HR) and corresponding 95% confidence intervals (95%CI) for being discharged home.
Results: A total of 591 inpatients were included. Of those, 430 (72.7%) were nutritionally-at-risk. For those that had screened positive, 241 (56.0%) and 214 (49.8%) inpatients were undernourished according to PG-SGA and to GLIM criteria, respectively. Agreement between PG-SGA and GLIM criteria was k=0.465. GLIM criteria sensitivity was equal to 70.5% and specificity was equal to 76.7%. Undernutrition evaluated by GLIM criteria was independently associated with lower probability of being discharged home, HR= 0.713 (95%CI: 0.576; 0.884).
Conclusion: Regarding the concurrent validity of GLIM criteria, a moderate agreement with PG-SGA was found. Sensitivity and specificity were high. Within this sample, GLIM criteria were independently associated with lower probability of being discharged home.
Disclosure of Interest: None declared.

O33

THE AUTOMATIC NUTRITIONAL RISK SCREENING SYSTEM (CONUT) PREDICTS THE MORTALITY RISK OF COVID-19 PATIENTS

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Rationale: Disease-related malnutrition increases the morbimortality of hospitalized patients. Since 2010, La Paz University Hospital, a tertiary level hospital in Spain, implemented an automatic nutritional risk screening system (CONUT) that can also predict complications and mortality. However, it has not been yet validated in COVID-19 patients. The main objective was to evaluate the CONUT tool as a prognostic predictor of mortality in patients hospitalized with COVID-19 from their admission from emergency department.
Methods: A longitudinal hospital-based study nested in a bigger cohort that included all patients consecutively hospitalized in HULP from 25 February (first case admitted) to 19 April 2020 (pandemic first wave) until *exitus letalis* or discharge was carried out. CONUT provides tree malnutrition alerts based on analytical parameters (albumin, total lymphocytes, and cholesterol): low (0-4 points), moderate (5-8), high (9-12). A univariate analysis and a logistic regression was carried out adjusted by a propensity score in order to control confusion data as sex, age and medical comorbidities
Results: Electronic health records from 1752 admitted patients diagnosed with COVID-19 were analyzed. Patients with a moderate (45.1%) and high (5.8%) malnutrition alert had 3.78 [3.07, 4.65] and 7.94 [4.85, 13.58] times more likely to die than patients with low malnutrition alert (p<0.001). The predictive power had an accuracy of 57.35%. The algorithm had a sensitivity of 65.98%, a specificity of 68.48%, a positive predictive value of 65.98% and a negative predictive value of 19.57%.
Conclusion: The CONUT predicts the risk of mortality in patients with COVID-19 admitted to a tertiary level hospital. The early detection of patients with a moderate or high risk of malnutrition will allow the immediate treatment of these patients, improving the risk of death.
Disclosure of Interest: None declared.

O34

APOB-48 LEVELS ARE RELATED TO PARENTERAL NUTRITION DEPENDENCE IN PATIENTS WITH SHORT BOWEL SYNDROME: A POTENTIAL BIOMARKER OF INTESTINAL FAILURE

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Rationale: Short bowel syndrome with intestinal failure (SBS−IF) is a rare condition that requires parenteral nutrition (PN). Citrulline levels are correlated with small bowel length in SBS-IF patients but evidence varies according to clinical settings. Apolipoprotein B-48 (apoB-48) is a protein exclusively synthetized by enterocytes. The secretion is associated with the chylomicron during the postprandial phase. We hypothesized that circulating apoB-48 levels could be a better reflect of the absorptive function of the remnant gut in patients with SBS-IF.
Methods: The aim of this study was to examine the evidence of plasma apoB-48 as a marker of intestinal function. We assessed correlation between apoB-48 concentration and remnant small bowel length or the PN dependence in SBS-IF cohort patients.
We recruited in an expert centre of PN, adults SBS-IF patients after 2 years of last surgery. Patients with active neoplasia or with an alternative treatment for intestinal failure (analogue of GLP2, reverse loop or intestinal transplantation) were excluded.
Fasting Apo-B48 and citrulline serum levels were measured by ChemiLuminescent Enzyme Immunoassay (Lumipulse 1200®) and compared to clinical and other biological data. PN dependence was estimated by a ratio; caloric intake provided by PN/ resting energy expenditure. Statistical correlations and study groups comparisons were conducted using Prism.
Results: Fifty-four patients were evaluated, aged between 20 and 83 years old (sex ratio H/F 0,86). Among them, 38 were still dependent on PN. The most frequent SBS etiology was mesenteric ischemia (44%). The median of the remnant small bowel length was 67,5 cm (min=0, max=280). Serum levels of Apo-B48 were not correlated with body mass index, sex, age nor triglycerides levels but were correlated with HDL cholesterol ($p < 0.01$). There was a robust correlation between serum Apo-B48 and remnant small bowel length ($p < 0,0001$). The correlation was significant whatever the type of intestinal anastomosis (end-jejunostomy, jejuno-colonic and jejunoileal anastomosis). Citrulline was correlated with remnant small bowel length ($p<0,01$). In the overall population, Apo-B48 was correlated with the PN dependence ($p<0,0001$) while PN dependence was also associated with remnant small bowel length ($p < 0,01$), and with citrulline ($p < 0,01$).
Conclusion: Serum apoB-48 concentration is strongly associated with the remnant small bowel length and with PN dependence in SBS patients. Our Results suggest that apoB-48 could be proposed as a marker of absorptive intestinal function and could be a complementary indicator to citrulline levels in assessing intestinal mass.
Disclosure of Interest: None declared.

O35

THE LEVEL OF ENERGY REQUIREMENTS OF PATIENTS AT THE STAGE OF EARLY NEUROREHABILITATION, DEPENDING ON THE LEVEL OF CONSCIOUSNESS

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