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addressed in the scientific literature. This study aimed to investigate the quality of vegan diets in European populations and the adequacy of macro- and micronutrient intakes compared with World Health Organization recommendations.

Methods: A systematic search in Pubmed, Web of Science, IBS, Cochrane library and Google Scholar was conducted and 48 studies (12 cohorts and 36 cross-sectional) were included.

Results: Vegan diets are lower in protein intake (particularly in essential amino acids) compared with other diet types and are associated with inadequate intake of vitamins B3, B5, B6, D, iodine, zinc, calcium, sodium, potassium, selenium. Vitamin B12 intake among vegans is significantly lower (0.24-0.49 μg, recommendations are 2.4 μg), and calcium intake in 76.1% of vegans was below recommendations (750 mg/day). No significant differences in fat intake were observed. Vegan diets are not related to deficiencies in vitamins A, B3, B5, C, E, iron, phosphorus, magnesium, copper and folate and show a lower glycemic load.

Conclusion: Following a vegan diet result in deficiencies as recorded for several micronutrients (vitamin B12, zinc, calcium, selenium) and the potential associated neurological, hemolentic, skeletal, immunological and hormonal impairments, should not be disregarded. Overall, individuals who are a vegan diet should be aware of potential risk be carefully monitored, and supplements’ use should be considered.

Disclosure of Interest: None declared

P016

BULBAR MOTOR NEURON SYMPTOMS LEAD TO DIFFERENT TYPES OF OROPHARYNGEAL DYSPHAGIA IN MND/ALS?

E. Romero1,2, M.N. Virgili3, M.A. Barcelo4, R. Dominguez5, V. Herrera2, M. Povedano1, on behalf of Functional Motor Neuron Unit (UFMN), Department of Neurology, Bellvitge University Hospital1 IBDIBELL [Institut d’Investigació Biomèdica Bellvitge], Spain; 2Endocrinology and Clinical Nutrition, Bellvitge University Hospital, L’Hospitalet de Llobregat, Spain; 3CIBER of Epidemiology and Public Health (CIBERESP), Madrid, Spain; 4Research Group on Statistics, Econometrics and Health (GCREs), University of Girona, Girona, Spain; 5Neurology, Bellvitge University Hospital, L’Hospitalat de Llobregat, Spain

Rationale: Oropharyngeal dysphagia (OD) is a frequent symptom in patients with Motor Neuron Disease (MND), up to 80% of them will have OD throughout the disease. OD may be one of the initial symptoms in patients with bulbar onset (speech and swallowing problems) or it can appear during the disease in spinal forms (involvement of upper or lower extremities). The first treatment of OD in neurodegenerative diseases is possible with a food texture modification, requiring different strategies for liquids and solid food.

The aim of our study was to assess the relationship between the patient self-perceived alteration in liquids or solids intake, and their bulbar involvement. Upper motor neuron (UMN) and lower motor neuron (LMN) signs in bulbar territory was studied.

Methods: 46 patients included, 52.2% women, with a mean age of 65 years. 76.1% had bulbar onset. A neurological examination of bulbar symptoms was carried out by the neurologist and a dysphagia assessment was conducted by the diettian. Eating Assessment Tool (EAT-10) and Swallowing Quality of Life (SwalQol) questionnaires were performed in all patients. Answers referring to problems with liquids and solid food were selected from both questionnaires, and stratified according to bulbar involvement (UMN, LMN, UMN + LMN or NO bulbar signs). Results of 46 patients/46 were obtained from the EAT-10 and from 34 patients/46 for the SwalQol.

Results: On neurological examination, 23.9% of the patients presented isolated UMN signs, 21.7% isolated LMN signs and 32.6% UMN and LMN signs and 21.7% had normal examination in bulbar territory. Liquid intake alterations were reported by 18 patients in EAT-10 and 13 in SwalQol, and solid intake difficulties were mentioned by 14 and 6 patients in the EAT-10 and in the SwalQol questionnaires respectively. Looking at the results obtained in the EAT-10 questionnaire, it was slightly more related to have problems with liquids in affected UMN patients or UMN+LMN, and problems with solids were only related to both MTN involvement. For the SwalQol results, only a relationship with liquid and solid intake problems was maintained in patients with UMN + LMN signs. Patients with normal examination in bulbar territory didn’t report swallowing problems with thin liquids neither with solid food.

Conclusion: Dysphagia is more prevalent in patients with bulbar symptoms. Having UMN or UMN+LMN signs, could explain the differences between patients with dysphagia of liquid and/or solid food. The exposed results only reflect the reality of our 46-patient sample. It would be necessary to replicate the study by expanding the sample in order to make an inference to the population with MND. This information will be of great interest in order to make dietary recommendations including a personalized food texture modification.

Disclosure of Interest: None declared

P017

ROLE OF IMPAIRED NUTRITIONAL STATUS IN SARS-COV 2 PATIENTS

E. Scarpellini, P. Santori, C. Rasetti, M. Basilico2, N. Giousa, on behalf of San Benedetto COVID-19 research group1/POSPEDEALE MADONNA DEL SOCCORSO, San benedetto del tronto, Italy

Rationale: SARS-COV-2 pandemia has hit on our lives affecting our survival rate. Preliminary evidences from literature have shown that obesity is a risk factor for higher mortality occurrence. Thus, we wanted to assess the nutritional status of patients admitted to our COVID-19 Unit. We aimed also to verify the possible correlation between nutritional status, inflammatory status and mortality.

Methods: We prospectively studied patients admitted to the COVID-19 Unit of San Benedetto General hospital. All the patients had biochemical, anthropometric, HRCT chest scan and nutritional assessments at the time of admission and, at 15 days interval follow-up.

Results: We studied 65 consecutive patients (mean age 65.8±2.5 years, BMI 23.2 Kg/m²). Main comorbidities were: diabetes (type 1 6%, type 2 35%), hypertension (45%), chronic ischemic heart disease (22 %), COPD (22%), anxiety (30%) and depression (20%). Moderate to severe overweight was present in 13% of patients; Onodera index (23.00±0.976), suggestive of malnutrition, was present in 20% of patients. Both PCR (C-reactive protein) and IL-6 values significantly correlated with worse radiologic pneumonitis progression (r=0.79 and r=0–0.72, respectively). After 15 days upon admission, we recorded 6 deaths (mean age 75.5±3.1 years, BMI 26.0 Kg/m²). Increased PCR and IL-6 values significantly correlated with exitus occurrence (r=0.78 and 0.75, respectively). Moreover, both overweight and malnutrition significantly correlated with exitus occurrence (r=0.67 and r=0.70, respectively).

Conclusion: We confirmed that higher inflammatory indexes significantly correlate with both worse radiological findings and fatal COVID-19

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P018

USEFULNESS OF INDIRECT CALORIMETRY IN BODY-BUILDER AND NON-BODY-BUILDER ATHLETES FOLLOW-UP

E. Scarpellini1, M. basilico*1, G. biancacci2, C. rasetti1, S. pierangelo1, C. d’E.R.C. sports association, Pagliare del tronto, Italy

Rationale: Natural body-building requires constant control of body composition and regulation of metabolism through diet. Only a few reports from literature show how the nutritional status (NS) assessment can be used in these athletes (1). Bio-impedance (BI) is the gold standard for NS assessment in humans. More recently, indirect calorimetry(IC) has been validated as the gold standard for the study of energy expenditure vs. caloric intake ratio (ECR) in humans (2).

Thus, we aimed to assess the NS and ECR of body-builder (BB) and non-body-builder athletes, healthy controls (HV), matched for sex and age.

Methods: we consecutively enrolled BB and non-body-builder athletes (namely, non-professional runners (NR)) vs. HV, matched by sex and age, via flyer advertisement. The subjects had a complete NS assessment (including BI end IC) under standard conditions, at the outpatient Nutrition clinic of the Internal Medicine Unit of San Benedetto del Tronto-General Hospital.

Results: We consecutively enrolled 30 athletes (12 body-builders (8 females, mean age 29.2 ± 2.5 years, BMI 22.2 ± 0.7 Kg/m²), 18 non-professional runners (12 females, mean age 35.5 ± 17.9 years, BMI 24.3 ± 0.7 Kg/m²)) and 16 healthy controls (11 females, mean age 36.7 ± 10.7 years, BMI 23.4 ± 0.8 Kg/m²).

There was a significant difference in BI between BB athletes and HV (phase angle: 5.1 ± 0.5 vs. 6.8 ± 0.4°, p < 0.05). This result was explained by the significantly lower content of extracellular water of BB (p < 0.05).

IC showed a significant difference in energy expenditure between BB athletes and HV (1578 ± 10.7 vs. 1243 ± 9.8 kcal, p < 0.05).

Conclusion: For the first time, this prospective pilot single-center study showed a significant difference of NS between BB vs. HV. Unexpectedly, BI difference was not explained by a bigger amount of lean mass but by lower extracellular water content of BB. Moreover, we found a significant difference in energy expenditure between BB and HV, explained by a higher basal metabolism of BB.

In order to confirm these preliminary results, we plan to assess the effects of a nutritional intervention on both BI and ECR’s NS.

Disclosure of Interest: None declared

P020

NUTRITIONAL SCREENING: THE RESULTS OF NUTRITIONDAY 2019 IN ECUADOR

E. Frias-Toral1, D. Rodriguez2, M. Guerrero3, G. Cucalon4, D. Carvajal5, A. Jimenez5, A.C. Tinoco6, J. Piedra7, 1 Research Committee, Ecuador; 2 Clinical Nutrition Service, SOLCA Guaqaquil, Ecuador; 3 Facultad de Ciencias de la Vida, ESPOL Guaqaquil, Guaqaquil, Ecuador; 4 Pediatrics, Cuenca, Ecuador; 5 Internal Medicine, Hospital Vicente Corral Moscoso, Cuenca, Ecuador

Rationale: It has been extensively documented the high relevance of nutritional screening at hospital admission since Malnutrition is a decisive factor for worse prognosis, increased length of stay, and more complications. NutritionDay is a one-day cross-sectional audit with outcome evaluation done worldwide. This report aims to present the Ecuadorian cross-sectional multicentre audit and registry for 2019, mainly focused on nutritional-related standards by participant hospitals and malnutrition diagnosis.

Methods: The worldwide trial was registered at clinicaltrial.gov (NCT02820046) and this report recollected the national data for the Nday in Ecuador for 2019. There were 6 participants hospitals in the Nday Ecuador for 2019, 3 of them from Guaqaquil and Cuenca uploaded their data to the electronic database. The present report focused on the following variables: weight, height, BMI, nutritional status according to BMI, nutritional-related standards, nutrition care strategy indicators.

Results: There were 8 participants units (2 pediatrics, 3 internal medicine, 2 surgery) from 2 hospitals located in the coastal region and one hospital from the highlands. In one hospital there were no nutritional support team, no records of height, BMI, or any nutritional-related standards. In 6 units the were no nutritional screening protocol done for hospitalized patients. According to BMI with the data from Nday 2019 in Ecuador there were detected more than 63% patients with malnutrition, including adult and pediatric population.

Table 1: Pediatric population according to BMI (adjusted to gender and age)

|          | Underweight | Healthy weight | Overweight | Obesity |
|----------|-------------|----------------|------------|---------|
| Female   | 0%          | 62%            | 38%        | 0%      |
| Male     | 17%         | 63%            | 3%         | 16%     |

Conclusion: In Ecuador there is a great need to implement nutritional screening as part of the admission protocol for all hospitalized patients.

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