Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
Rationale: Total parenteral nutrition (TPN) is used in the treatment of sick individuals who commonly present in hospital. Total parenteral nutrition (TPN) is used in the treatment of sick individuals who commonly present in hospital. The main expectation of NS was to regain strength. NS is perceived to support recovery but remains limited after discharge and not fully in line with patient's expectations. Areas of attention include discharge management, patient education and better consideration of patient’s goals to preserve and/or restore nutritional status, strength and function.

Conclusion: Baseline characteristics of COVID-19 patients in the ICU were similar during the 4 waves. There was a wider use of PN in the 1st wave compared to the subsequent ones, when patients received more EN. We should specially take care of patients with high flow nasal cannula as they may not achieve nutritional requirements.

References: Phibault R, Seguin P, Tamion F, Pichard C, Singer P. Nutrition of the COVID-19 patient in the intensive care unit (ICU): a practical guidance. Crit Care. 2020 Jul 19;24(1):447.

Disclosure of Interest: None declared.

PB-047

NUTRITIONAL THERAPY IN CRITICALLY ILL COVID19 PATIENTS, HAVE THERE BEEN ANY DIFFERENCES BETWEEN THE 4 PANDEMIC WAVES?

L. González*, C. Velasco, M. Motilla, M. Camblor, C. Serrano, I. Breton, C. Galvo, L. Arbiol, A. Morales, M.L. Carrascal, C. Cuerda. Endocrinology & Nutrition, Gregorio Marañon University General Hospital, Madrid, Spain

Rationale: An adequate nutritional support is essential in the outcomes of critically ill patients with COVID-19. Objective: To know whether there are any differences in nutritional therapy and prognosis of critically ill COVID-19 patients during the 4 waves.

Methods: Randomized retrospective study of critically ill COVID-19 patients admitted to our hospital during the 4 waves. Clinical, therapeutic and nutritional support variables were collected. The variables are expressed in% and median (IQR). IBM-SSPS26v.

Results: 80 patients (20 per wave) aged 63 (57-70) years, 68.8% men, BMI 29.7 kg / m2 (26.6-32.4), caloric requirements 1711 kcal (1600-1914) and protein 89 g (83.2-99.5). There were no significant differences between waves in age, sex, admission PAFI, BMI, comorbidity, days to ICU admission, nutritional requirements, IMV days, ICU or hospital length of stay. The table shows the variables in which we found significant differences (p<0.05):

|                              | 1* (n=20) | 2* (n=20) | 3* (n=20) | 4* (n=20) |
|------------------------------|-----------|-----------|-----------|-----------|
| High-flow nasal oxygen (n, %)| 19(95)    | 20(100)   | 20(100)   | 20(100)   |
| Time from ICU admission to nutritional support (days) | 0(0-1)    | 1(0-4)    | 2(1-5)    | 2(1-4)    |
| % of kcal requirements based on ICU day 4 | 2(1-7-3) | 3(2-5)    | 3(3-5)    | 3(1.25-5.75) |
| % of kcal requirements based on ICU day 7 | 102(82-118) | 40(1-65) | 16(0-72) | 39(0-64) |
| Parenteral nutrition(PN) 7th ICU day, n, % | 9(45)     | 7(35)     | 2(10)     | 1(5)      |
| Enteral nutrition (EN) 7th ICU day, n, % | 3(15)     | 6(30)     | 13(65)    | 5(25)     |

Methods: Patients were included from Ipsos iSay panel (March-April 2021) if >18yrs and hospitalized for >2 days due to COVID-19. The online survey explored impact of COVID-19, NS received and patients' experience and perspective on nutrition during recovery.

Results: 453 patients (43 ± 14yrs; 55% male) participated from Spain (n=269), Italy (n=167), France (n=42), UK (n=26) and Germany (n=23). Median hospital stay was 7 days, with 38% of patients being admitted to ICU. COVID-19 symptoms were often included changes in smell/taste (44%/49%), diarrhea (37%) and swallowing issues (25%), 65% of patients lost >5% weight. 42% felt a lot weaker after discharge, with more difficulty with

daily tasks such as climbing stairs (85%). 50% received medical nutrition in hospital. 27% of tube-fed patients received no NS after extubation despite struggling to eat. After discharge, only 11% received oral nutritional supplements although 80% had eating challenges; appetite loss and dysphagia were often reported. 56% agreed that NS helped “a lot/enormously” in recovery. The main expectation of NS was to regain strength. 68% felt the need to look for more information, in particular on how to combat weakness or support immunity.

Conclusion: Patients report a significant impact of COVID-19 on weight loss, strength and function. NS is perceived to support recovery but remains limited after discharge and not fully in line with patient’s expectations. Areas of attention include discharge management, patient education and better consideration of patient’s goals to preserve and/or restore nutritional status, strength and function.

References: Thibault R, Seguin P, Tamion F, Pichard C, Singer P. Nutrition of the COVID-19 patient in the intensive care unit (ICU): a practical guidance. Crit Care. 2020 Jul 19;24(1):447.

Disclosure of Interest: None declared.
LB-048

THE EFFECT OF NUTRITIONAL SUPPORT ON THE TREATMENT PROCESS OF ADULT PATIENTS IN THE INTENSIVE CARE UNIT

B. Yürük, F. Çelik, I.H. Bağış*. Biruni University, Istanbul, Turkey

Rationale: This study aims to use examine the effectiveness of nutritional support applied to patients with chronic diseases treated in intensive care for different reasons.

Methods: This retrospective and cross-sectional study was conducted with 155 patients treated in the intensive care unit of Biruni University Hospital (Istanbul/Turkey). From the hospital information management system and the archive files of the patients; anamnesis, disease history, biochemical parameters and nutritional support data were collected. "Pearson Chi-square" or "Fisher’s Exact" for qualitative variables, and according to the suitability of the data for quantitative variables; "Independents-Sample T Test", "One-Way ANOVA", "Mann-Whitney U" or "Kruskal-Wallis H" tests were used. In addition, "Paired-Samples T Test", "Repeated Measures ANOVA", "Wilcoxon" or "Friedman" tests were used for biochemical parameters.

Results: Patients with a median age of 75 (IQR: 40-99) years and a hospital stay of 8 (IQR: 3-30) days; 49.7% are female. It was observed that 83.2% of the patients were given nutritional therapy and 38.8% of them were started on the first day. It was determined that the number of comorbidities made a significant difference on the time of initiation of nutritional therapy (p=0.003) and the time of initiation of nutritional therapy on the duration of hospitalization (p<0.001). Phosphorus and creatinine in patients receiving nutritional therapy; CRP, hematocrit and hemoglobin were found to be different according to the nutrition initiation time (p<0.05). It was determined that the time of initiation of nutritional therapy made a significant difference on the length of stay (p<0.001).

Conclusion: In conclusion, it has been revealed that the application of timely and adequate nutritional therapy supports survival, shortens the length of hospital stay and positively affects the prognosis of the disease.

References:
Chen, J., Sun, D., Yang, W., Liu, M., Zhang, S., Peng, J., & Ren, C. (2018). Clinical and economic outcomes of telemedicine programs in the intensive care unit: a systematic review and meta-analysis. Journal of Intensive Care Medicine, 33(7), 383–393.

Disclosure of Interest: None declared.

LB-049

THE RELATIONSHIP OF VITAMIN C AND SURVIVAL IN COVID-19 PATIENTS TREATED IN INTENSIVE CARE UNIT

I.H. Bağış*, F. Çelik, M. Soylu. Biruni University, Istanbul, Turkey

Rationale: It is stated that the administration of high doses of intravenous (IV) vitamin C (VC), which has been the subject of discussion since the beginning of the COVID-19 pandemic, may be associated with the cytokine storm observed during infection and increasing in parallel with the severity of the disease, and immunosuppressive effects may be observed. In this study, it was aimed to examine the relationship between IV VC and survival in patients with COVID-19 infection hospitalized in the intensive care unit (ICU).

Methods: This retrospective and cross-sectional study was carried out using data from 130 patients (68 male) treated with the diagnosis of COVID-19 in the ICU of Biruni University Hospital (Istanbul). From management system and the archive files of the patients; anamnesis and disease history collected. According to the patient’s prognosis, IV VC was administered as 2-12 g/day in the ICU and biochemical parameters data were evaluated.

Results: Intravenous VC treatment was given to 53 (32 men) of 130 COVID-19 patients with a median age of 73 (IQR: 26-96) years. Length of hospitalization was higher (12 days vs. 6 days, p<0.05) in patients managed with VC than in those without. The administration of VC was associated with a significant increase in C-reactive protein, hematocrit and hemoglobin levels were higher in patients under 65 years of age who were received IV VC treatment; in patients over 65 years of age, sodium was found to be higher than those who were not received (p<0.05). 38 (68.4% men) of the patients who were given IV VC treatment and 46 (41.3% men) of those who were not given exits. It was observed that the survival ratio of men given IV VC treatment was lower than that of women (p=0.034).

Conclusion: This study showed that administrated VC did not improve the survival and length of hospitalization. More large-scale studies are required to further assess the role of VC in the treatment of COVID-19.

References:
Boretti, A., & Banik, B. K. (2020). Intravenous vitamin C for reduction of cytokines storm in acute respiratory distress syndrome. PharmaNutrition, 100190.
Milani, G. P., Macchi, M., & Guz-Mark, A. (2021). Vitamin C in the Treatment of COVID-19. Nutrients, 13(4), 1172. doi.org/10.3390/nu13041172

Disclosure of Interest: None declared.

LB-050

RECOVERY PROGRAM FOR CRITICALLY ILL COVID-19 PATIENTS AFTER 6 WEEKS OF FOLLOW-UP FROM DISCHARGE

A.P. Morales Cerchiaro1,2,3, M.L. Carrascal1,3, L. Arhić1,2,3, C. Velasco1,3, L. Breton1,3, M. Motilla1,2,3, C. Serrano1,3, C. Calvo1, L. González1, D. Muñoz1, M. Cambor1,3, L. Frias1, C. Cuerda1,2,3, 1Unidad De Nutrición Clínica Y Dietética, Hospital General Universitario Gregorio Marañón, Spain; 2Facultad de Medicina, Universidad Complutense de Madrid, Spain; 3Instituto de Investigación Sanitaria Gregorio Marañón, Spain

Rationale: To assess the evolution of the patients with severe pneumonia due to COVID19 who have required intensive care (ICU).

Methods: Prospective observational study. 212 ICU patients were included from March 16-2020, to June 25-2021.Clinical evaluation (including nutritional, functional, strength, dependency and quality of life assessment) was carried out during hospitalization and by telephone 6 weeks after discharge. Age, sex, hospital stay, ICU stay, weight, height, weight loss, BMI, dietary intake estimation, Barthel scale, SARC-F test and the EQ-5D-5Lquestionnaire, nutritional treatment and therapeutic compliance were collected. The results are expressed as mean±SD and percentages (IBM-SPSS21). Results: 212 patients aged 58.4±12.4 years were included, 63.7% male, weight at discharge 76.6±16.1kg, BMI 26.1±4.7kg/m2. Total stay 53.1±38.1 days, ICU stay 30.2±28.0 days and 61.5% needed intubation. Mean percentage of weight loss at hospital discharge was 12.2±7.3%, 9.3% had dysphagia and 74.7% had an oral nutritional supplement prescribed at discharge.

Conclusion: Patients gained weight, improved intake, reduced the risk of sarcopenia, and perceived a significantly better quality of life after 6 weeks of hospital discharge. There was a good compliance with the specific nutritional therapy that can be important in the recovery of these patients.

References:
Thibault R, Seguin P, Tamion F, Pichard C, Singer P. Nutrition of the COVID-19 patient in the intensive care unit (ICU): a practical guidance. Crit Care. 2020 Jul 19;24(1):447.

Disclosure of Interest: Á. Morales Cerchiaro Grant / Research Support from: Nestlé Health Science, M. L. Carrascal: None declared, L. Arhić: None

Table 1

|                         | Discharge from ICU | 6 weeks after hospital discharge |
|-------------------------|--------------------|---------------------------------|
| Weight (kg)*            | 76.6±16.1          | 79.3±15.2                       |
| BMI (kg/m2)*            | 26.9±5.3           | 28.2±4.7                        |
| SARC-F*                 | 5.7±2.5            | 1.7±2.1                         |
| EQ-5D-5L (points)*      | 55.5±19.4          | 72.2±18.6                       |
| Barthel Scale*          | 72.7±22.2          | 87.5±18.7                       |
| Therapeutic compliance  | 84.5               | 51.5                             |
| Dietary Intake>75%*     | 47.5               | 87.1                             |