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Rationale: The aim of this analysis was to determine the characteristics of COVID-19 patients assessed by critical care dietitians during the COVID-19 pandemic.

Methods: Nutrition parameters were collected for all patients admitted to the intensive care unit (ICU) with COVID-19 and a length of stay (LOS) >48hrs. Data was compared from March-June 2020 (T1) to January-April 2021 (T2).

Results: 64 patients in T1 and 77 patients in T2 were assessed by a critical care dietitian and 100% required nutrition support. Mean age in T1 was 60.6yrs (66% male) compared to 63.1yrs in T2 (62% male). Mean BMI was 29.6kg/m² in T1 and 30.2kg/m² in T2. 72% of patients required mechanical ventilation in T1 and 78% in T2 with the remainder on non-invasive ventilation (NIV). During T1 78% transferred to ward level care with 48% in T2. The average ICU LOS of 16 days in T1 and 22 days in T2 (2 patients remain in ICU at time of data analysis). Of those that transferred to the ward 100% required on going dietetic input at both time periods. In T1 41% were discharged on enteral nutrition (EN) and 50% discharged on EN in T2.

Type of nutrition support | March-April 2020 | Jan-April 2021
---|---|---
Oral nutrition support (ONS) | 34% | 17%
Enteral nutrition (EN) | 55% | 58%
ONS + supplementary EN | 6% | 12%
Parenteral nutrition | 0% | 1%
EN + supplementary PN | 5% | 12%

Conclusion: All COVID-19 patients with an ICU LOS >48hours were assessed by a critical care Dietitian.

The patient profile was similar in both cohorts and 100% required nutrition support with ONS, EN, PN or a combination of these. All patients on NIV required ONS with increasing numbers being commenced on supplementary EN in T2.

On transfer to ward level care 100% of patients required nutrition support highlighting the need for on-going dietetic input.

Disclosure of Interest: None declared.

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COMPARATIVE STUDY ON THE CLINICAL OUTCOMES OF CRITICALLY ILL COVID-19 PATIENTS BETWEEN THOSE WITH ADEQUATE AND INADEQUATE NUTRIENT INTAKE ADMITTED AT ST. LUKE’S MEDICAL CENTER

K.F. Mendoza 1, O.D.G. Quizon 2, D.C.D.S. Redondo-Samin 1, J.A.B. Roncesvalles 1, 1Clinical Nutrition, St. Luke’s Medical Center, Quezon City, Philippines; 2Clinical Nutrition, St. Luke’s Medical Center, Quezon, Philippines

Rationale: The early detection of malnutrition in critically ill COVID-19 patients and its management is very essential towards better clinical outcomes. This study aims to determine the associations of adequacy in nutrient intake and length of hospital stay, ICU length of stay, ventilator days and mortality.

Methods: This retrospective study included all critically ill COVID-19 adult patients that met the inclusion criteria and assessed by the Clinical Nutrition Service admitted at the ICU of St. Luke’s Medical Center from March to December 2020. Adequacy of calorie and protein intake, mortality, number of ventilator days, length of ICU and hospital stay were documented. Descriptive statistics were used to summarize the data with P-values of <0.05 considered significant. The adequacy of calorie and protein intake was defined as 75% of calorie and protein goals. Data analysis was applied to compare clinical outcomes of critically ill COVID-19 patients between those with adequate and inadequate intake with the outcomes - mortality, mechanical ventilator days, length of ICU days and length of hospital stay.

Results: A total of 155 patients were included in the study, average age of 66 years old, majority male (65%). More than 36% of patients had normal BMI; however, more than 50% have a BMI of at least 25.0. More than half of patients had an enteral route of feeding (54%), while the rest mostly had oral feeding (40%). A prevalence of 33% for inadequate protein intake and 32% for inadequate calorie intake have been estimated. Overall, 89% of patients used mechanical ventilator, with an average length of use of about 15 days. The average length of ICU stay was 12.65 days, while the average hospital stay is almost double, at 23.15 days. More than a third of the patients expired (39.35%) while more than 60% were discharged.

The study primarily focused on comparing outcomes among different level of nutritional status of patients. Inadequate calorie and protein intake had a significantly higher proportion of use of mechanical ventilator; however, the average length of use for both groups are not significantly different. The length of ICU stay and total length of hospital stay is also comparable between both groups. The proportion of mortality is significantly higher among patients with inadequate calorie intake (84%) versus those with adequate calorie intake (19%). Similarly, higher mortality rate seen among inadequate protein intake (78%) versus those with adequate protein intake (20%).

Conclusion: Adequate nutrient intake in critically ill COVID-19 patients were associated with decreased mortality rate, ICU and hospital length of stay but, longer mechanical ventilator days. Several factors may have affected the adequacy in nutrient intake which includes hemodynamic instability, diagnostic/therapeutic procedures, tolerance/complications of feeding, poor appetite, poor documentation of food intake and the severity of disease condition. Most of the patients that expired were the elderly population with comorbidities. The great impact of improved clinical outcomes highlights the importance of nutrient intake monitoring in the optimization of nutrition delivery among critically ill COVID-19 patients.

Disclosure of Interest: None declared.