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**IMPACT OF A SIMPLIFIED ICU NUTRITION PROTOCOL DURING THE 1ST WAVE OF THE COVID-19 PANDEMIC**

A. De Watteville *[1,2], T.-H. Collet [1], F. Montalbano [2], H. Wozniak [2], C. Jaksic [3], L. Genton [1], C.P. Heidegger [2]. [1] *Clinical Nutrition, Department of Medicine, Switzerland;* [2] *Division of Intensive Care, Department of Acute Medicine, Switzerland;* [3] *Division of Clinical-Epidemiology, Department of health and community medicine, Geneva University Hospitals and University of Geneva, Geneva, Switzerland*

**Rationale:** The COVID-19 pandemic led to a major increase in the number of patients in the intensive care unit (ICU) with huge organizational challenges. Therefore, a pragmatic approach with a simplified nutrition protocol (SNP) was needed to maintain quality of care. This observational retrospective study aimed to evaluate the impact of the SNP on the quality of nutrition therapy for critically ill COVID-19 patients.
**Methods:** All COVID-19 patients with a minimum 4 days stay in the ICU of the Geneva University Hospitals (March 9 to May 19, 2020) were included. The nutritional outcomes since day 4 were compared between patients admitted to the ICU before and after the implementation of the SNP. Patients whose ICU stay was across the date of the SNP implementation were excluded from analysis.
**Results:** Out of 119 patients, 48 were included in the before-group and 24 in the after-group. The mean age was 63.2 (± SD 12.7) years and 76% were men. As shown in the table, calories and proteins provided by nutrition therapy and the % of days in the energy target increased after SNP implementation. No significant difference was observed in % of days in the protein target.

| Mean ± SD | SNP before-group (n=48) (March 9 – April 5, 2020) | SNP after-group (n=24) (April 6 – May 19, 2020) | p-value |
|---|---|---|---|
| Total calories provided, kcal/d (including propofol and glucose) | 1070 (± 505) | 1357 (± 396) | 0.018 |
| Total proteins provided, g/d | 37 (± 18) | 51 (± 17) | 0.002 |
| % of days in the energy target (80-100%) | 11 (± 15) | 20 (± 17) | 0.021 |

**Conclusion:** The total daily calorie and protein intake as well as the percentage of days in the energy target increased significantly after implementing the SNP. Further nutrition therapy improvements with better protein coverage are needed to assess the impact of this approach on patients' clinical outcomes.
**Disclosure of Interest**: None declared.

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**NUTRITIONAL ADEQUACY IN MECHANICALLY VENTILATED COVID-19 PATIENT: ARE DIFFERENT FROM OTHER CRITICALLY ILLNESS PATIENTS?**

M.G. Castro*, P.B. Nogueira, D.O. Toledo, C.R. Laselva on behalf of EMTN Einstein Group. *Clinical Nutrition, Hospital Israelita Albert Einstein, São Paulo, Brazil*

**Rationale:** Enteral feeding intolerance is common during the early and late acute phases of critical illness. Early experience with COVID-19 patients suggests that gastrointestinal symptoms are common and associated with greater severity of illness. This study aims to assess the nutritional adequacy of energy, protein and prescribed versus administered volume of enteral nutrition in mechanically ventilated (MV) COVID-19 patients and compared with critically ill non COVID-19 patients.
**Methods:** We conducted a retrospective review of adult patients admitted on the COVID-19's Intensive Care Unit (ICU) between March 2020 and April 2021. The protein and energy adequation (% of goal delivered) and digestive symptoms (diarrhea, vomiting and bloating) were evaluated and after compared with patients in non Covid-19 ICU.
**Results:** We analyzed 302 eligible patients, 227 in COVID-19 group and 75 in non COVID-19 group . The mean adequacy of energy were 80% in both groups and protein 82% (IQR 1 - 149%) in COVID-19 group and 72% (IQR 0 – 138%) in non COVID-19 (p=0.04). Only bloating was significant higher in non COVID-19 patients (6.6% x 3.5%, p= 0.0001). There were no difference in vomiting or diarrhea.
**Conclusion:** Critically ill patients with COVID-19 have a good tolerance of enteral nutrition therapy, maybe even better than other critically ill patients non COVID.
**Disclosure of Interest**: None declared.

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**TOLERABILITY OF ENTERAL NUTRITION IN EXTRACORPOREAL MEMBRANE OXYGENATION AND COVID-19**

M.G. Castro*, D. Diament, P.B. Nogueira, F.J. Pfeilsticker, D.O. Toledo, C.R. Laselva on behalf of EMTN Einstein Group. *Clinical Nutrition, Hospital Israelita Albert Einstein, Sao Paulo, Brazil*

**Rationale:** The use of veno-venous extracorporeal membrane oxygenation (vv-ECMO) is increasing during COVID-19 pandemic. Previous studies are controversy about tolerance of enteral nutrition to providing adequate nutrition support for patients on vv-ECMO. We aimed to evaluate the tolerance and adequation of enteral nutrition (EN) therapy in vv-ECMO COVID-19 patients compared with COVID-19 patients without vv-ECMO.
**Methods:** We conducted a retrospective review of adult patients admitted on the COVID-19's Intensive Care Unit (ICU) between March 2020 and April 2021. The protein and energy adequation (% of goal delivered) and adequation of prescribed versus administered volume of enteral nutrition were evaluated in vv-ECMO and non vv-ECMO patients.
**Results:** We analyzed 126 eligible patients, 29 in vv-ECMO group and 97 in non vv-ECMO group . The mean age was 63 (SD 13,12) and 40% were obese. Mean energy were 85% (IQR, 4 - 129%) in vv-ECMO patients and 81% (IQR, 1 - 149%) in non vv-ECMO patients (p 0.056) and protein 87% (IQR, 3 e 168%) in vv-ECMO and 84% (IQR, 3 e 190%) in non vv-ECMO (p = 0.04). The adequacy between prescribed versus administered volume of enteral was greater in vv-ECMO group 84% (IQR, 5 e 100) versus 79% (IQR 1 – 100), p 0.004.
**Conclusion:** Adequate energy and protein delivery during vv-ECMO is possible and EN is safe and well-tolerated during ECMO. Prospective studies investigating optimal feeding in this patient cohort are required.
**Disclosure of Interest**: None declared.

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**VITAMIN D STATUS OF CRITICALLY ILL PATIENTS WITH COVID-19**

S. Airey*, D. Harman. *Royal Papworth Foundation NHS trust, Royal Papworth Hospital NHS Foundation Trust, Cambridge, United Kingdom*

**Rationale:** Vitamin D may enhance the immune response against respiratory viruses. Vitamin D treatment might decrease the incidence of viral respiratory tract infections in patients with vitamin D deficiency[(1)]. NICE guidance[(2)] concluded further research is required to confirm the impact of vitamin D on COVID-19 and studies are currently in progress. It is not common practice to test vitamin D status on admission to intensive care