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Results: Median with minimum and maximum.

Methods: In a tertiary care hospital, 50 critically ill patients with a mini-
mum length of stay (LOS) of 7 days were prospectively followed up until
the ward and ICU for long stay patients.

Conclusion: Feeding intolerance during prone position was not different
in comparison to supine position. Algorithms development is necessary for
the prevention and treatment of FI to avoid EN interruptions and adverse
clinical outcomes.

Disclosure of Interest: None declared

P443

UNCOVERING THE DARK SIDE OF THE MOON: NUTRITION ADEQUACY IN
LONG TERM CRITICALLY ILL PATIENTS

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Rationale: Adequate nutrition therapy, consisting of calories and proteins, is
correlated with improved survival in critically ill patients. International
benchmarking data reveals important iatrogenic malnutrition in this acute
phase. Less is known on adequacy in long stay ICU patients and survivors in
the ward. The aim of this study is to investigate nutritional adequacy on
the ward and ICU for long stay patients.

Methods: In a tertiary care hospital, 50 critically ill patients with a mini-
mum length of stay (LOS) of 7 days were prospectively followed up until
hospital discharge or 28 days of ward stay. Daily nutrition therapy ade-
quacy, calculated by the ratio intake/needs and expressed in %, was eval-
uated. Baseline characteristics, mortality, LOS as well as weight evolution
were recorded. Results are expressed in mean with standard deviation or
median with minimum and maximum.

Results: 3 patients dropped out and were excluded. Of the 47 patients, the
mean age was 62±16 years with a mean BMI of 30±6kg/m². 14 were female
and 33 were male. 12 patients died in the ICU and 3 subsequently died on
the ward. The median LOS was 14(7–35) days in ICU and 11(7–31) days on
the ward.

In the ICU, the mean adequacy for calories compared to proteins, was
respectively 77±27% and 70±28% (p=0.002). On the ward, mean ade-
quacy for calories compared to proteins, was respectively 58±25% and
52±24% (p=0.002). The difference between both caloric and protein
adequacy in the ICU versus the ward were also statistically significantly
different, respectively p=0.002 and 0.004. The median weight difference
between the day of inclusion and discharge of the ward was 8.5(–9 to +9)
kg.

Conclusion: Nutritional adequacy still is a challenge in critical ill patients
and can result in significant weight loss. However, efforts should first be
directed towards the ICU patients when they are discharged towards the
ward where adequacy is even lower than in the ICU.

Disclosure of Interest: None declared

P444

ONE YEAR OUTCOMES OF MECHANICALLY VENTILATED COVID-19 ICU
SURVIVORS: A PROSPECTIVE COHORT STUDY

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Rationale: Data on long-term recovery and associations with muscle ar-
chitecture in patients after severe Coronavirus Disease-19 (COVID-19) are
lacking. We characterize multi-domain recovery and changes in body
composition of mechanically ventilated COVID-19 ICU survivors over 12
months after hospital discharge.

Methods: Prospective cohort study including 94 patients admitted for
mechanical ventilation with assessment of radiological, functional, and
patient-reported outcomes at 3 and 12 months post hospital discharge.

Conclusion: Between 3 months and 1 year after hospital discharge, me-
chanically ventilated COVID-19 ICU survivors showed significant recovery
regarding skeletal muscle function and health-related quality of life,
despite absence of change in skeletal muscle area. There were no signifi-
cant interactions between changes in muscle architecture and degree of
recovery of functional outcomes.
FEEDING CRITICALLY ILL TRAUMA PATIENTS: THE DIFFERENCE A DECADE MAKES

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Rationale: Guidelines now advocate for early hypocaloric and higher protein goals, particularly after major trauma, yet changes in practice, in patients with or without a head injury, have not been quantified. We quantified change in nutrition practices in these patient cohorts over time.

Methods: A prospective observational study included adult trauma patients receiving mechanical ventilation and artificial nutrition support at a single-centre ICU between Feb 2005–Dec 2006 (cohort 1) and Dec 2018–Sept 2020 (cohort 2). Patients were grouped as head injury and non-head injury. Patient demographics, clinical data, and energy and protein prescriptions and delivery were recorded. Nutrition adequacy was defined as the difference between prescription and delivery. Data are mean±SD or median [IQR]. Wilcoxon rank-sum test assessed differences between cohorts and subgroups, P<0.05.

Results: Cohort 1 included 109 patients, and 112 in cohort 2 (46±19 vs 50±19y; 80 vs 79±15% APACHE II 16 [12-20] vs 17 [13-21]) Energy prescription (1988 [1839-2168] vs 2348 [2108-2529] kcal) and delivery (1127 [731-1433] vs 1467 [1226-1718] kcal) decreased over time, regardless of subgroup (all P<0.05). While protein prescription was similar over time in all subgroups, protein delivery reduced overall (cohort 1 vs 2: 53 [36-71] vs 64 [52-78] g, P<0.05), and in the non-head injury subgroup (cohort 1 vs 2: 70 [56-82] vs 45 [26-64] g, P<0.05). Subsequently, energy and protein adequacy worsened over time in non-head injured patients (energy: 62 [40-73] vs 70 [54-82] %, protein: 61 [39-74] vs 71 [58-81] %; both P<0.05), yet protein adequacy improved in head-injured patients (cohort 1 vs 2: 71 [60-84] vs 64 [55-75] %, P<0.05).

Conclusion: Energy and protein adequacy has regressed over time in non-head injured trauma patients, while protein adequacy has improved in those with a head injury. Reasons for this should be explored.

Disclosure of Interest: None declared

P447

NUTRITIONAL FAILURE IN PATIENTS SUFFERING FROM ACUTE BRAIN ATTACKS IN THE CRITICALLY ILL

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Rationale: Severe brain attack patients demonstrate hypermetabolic state and gastrointestinal dysfunction leading to expatiated nutritional failure. This study aimed to estimate the time point where the development of nutritional failure and feeding-related complications are more likely among critically ill, mechanically ventilated patients with severe brain attacks including TBIs and acute stroke.

Methods: This prospective observational study took a place in six ICUs from two main governmental referral medical centers in Jordan. The aim of the study was achieved through determining eligible patients for bedside observation and then performing data observation for predetermined parameters over five successive points carried out over nine days on the every-other-day basis starting from EN initiation.

Results: 84 patients with 55% mortality risk and mechanical ventilation were included. Over observation period, gastric residual volumes increased (144 vs. 196 ml), body weights decreased (79.4 vs. 74.3 Kg), and serum albumin reduced (3.6 to 3.1 g/dL). Caloric attainment and malnutrition scores were deteriorated in addition to the increment of feeding-related complications. Nutritional failure was evidently prevalent between 3rd–5th day of observation.

Conclusion: Earlier period of enteral nutrition entails higher probability of nutritional failure among severe brain attack patients in the intensive care.

Disclosure of Interest: None declared

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LOW SKELETAL MUSCLE INDEX AND MYOSTEATOSIS AS PREDICTORS OF MORTALITY IN CRITICALLY ILL SURGICAL PATIENTS

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Rationale: Low muscle mass and other specific body composition indexes, assessed by computed tomography (CT), are associated with adverse outcomes after elective surgery, such as an increased risk of postoperative complications and higher mortality. However, limited information is available about the role of these indexes on short- and long-term outcomes in surgical patients admitted to the intensive care unit (ICU). The aim of the study was to assess the association of body composition indexes with 90-days mortality in this specific patient cohort.

Methods: We performed a retrospective study including adult surgical patients admitted to the ICU between 2014 and 2018 who underwent a CT scan at the time of admission. Total Muscle Area (TMA), Total Fat Area (TFA), Visceral fat area (VFA) and Intramuscular fat area (IMFA) were measured. Skeletal Muscle Index (TMA/m2), MyoSteatosis (IMFA/TMA), Visceral Fat to Muscle ratio (VFA/TMA) were then calculated. We analyzed the impact of these indexes on mortality.

Results: 204 patients were included. Overall 90-day mortality was 28%. Log rank test and cox multivariate analysis on 90-day mortality showed a significant association of low SMI and myosteatosis with 90-days mortality (table 1) along with SAPS II and comorbidity score (CCI). Myosteatosis was also significantly associated with prolonged mechanical ventilation and increased ICU length of stay (HR: 4.20; P<0.006; HR: 4.49; P=0.005)

Table 1.

| Variable | HR | 95% CI | p |
|----------|----|--------|---|
| SAPS II score | 1.05 | 1.03-1.07 | <0.001 |
| CCI-4 | 2.41 | 1.36-4.28 | 0.003 |
| Skeletal muscle index | | | |
| Middle versus lower tertile | 0.45 | 0.24-0.83 | 0.011 |
| Highest versus lower tertile | 0.42 | 0.21-0.82 | 0.011 |
| Myosteatosis | | | |
| Middle versus lower tertile | 0.92 | 0.31-2.03 | 0.828 |
| Highest versus lower tertile | 2.11 | 1.10-4.02 | 0.024 |

Conclusion: Specific body composition indexes may predict mortality in surgical patients admitted to the ICU. Low skeletal muscle index and myosteatosis were independently associated with increased 90-day mortality.

Disclosure of Interest: None declared

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HIGHER ENERGY AND PROTEIN INTAKES IN THE LATE PERIOD OF THE ACUTE PHASE MAY BE ASSOCIATED WITH A LOWER RISK OF 30 - DAY MORTALITY IN CRITICALLY ILL PATIENTS.

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Rationale: The absence of recommendations for energy and protein intakes in the later period of the acute phase cannot be entirely explained by a lack of data. The aim of this study was to test the hypothesis that higher energy and protein intakes in the late period of the acute phase may be associated with a lower risk of 30-day mortality in critically ill patients.