Orals

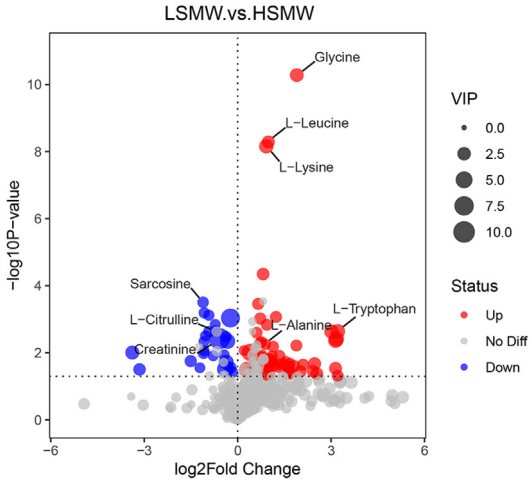
Oral Communications I - Assessment in cancer

O001

THE EFFECTS OF ACUTE SKELETAL MUSCLE WASTING ON FRAILTY AND METABOLIC PROFILE IN PATIENTS WITH TRAUMA

F. Niannian [1], L. Zhang *[,1], X. Wang [1], Y. Zhang [1], Y. Shi [1]. [1] *Jingling Hospital, Nanjing, China*

Rationale: Acute skeletal muscle wasting occurs in trauma patients during ICU hospitalization, which threatens the recovery of trauma patients and affects the prognosis of trauma patients. The relationship between acute skeletal muscle wasting after ICU admission and frailty one year after discharge is currently unclear. Meanwhile, multiple pathways of acute skeletal muscle wasting in trauma patients have not been fully explored.
Methods: In this single-center, prospective, observational study involving patients with trauma,the SMI at the third lumbar vertebra (L3SMI) was measured on days 1 and 7 after ICU admission. ΔSMI was the difference between the two. Based on the cut-off value of ΔSMI, the patients were grouped into high acute skeletal muscle wasting (HSMW) and low acute skeletal muscle wasting (LSMW) groups. We assessed the correlation between ΔSMI and frailty 1 year post-discharge and the metabolic profiles with untargeted metabolomics.
Results: 99 eligible patients with trauma completed follow-up. ΔSMI using the cut-off value of 3.022 cm^2/m^2 was significantly associated with frailty 1 year post-discharge. The metabolic profiles between the HSMW and LSMW groups were distinct, primarily involving amino acid and carbohydrate metabolism, with a potentially link to muscle mass. Meanwhile, the results showed that the metabolism of glycine, serine and threonine was the most significantly enriched in these pathways, among which glycine had the highest multiple in LSMW, with a FC value of 3.73 (Fig1). We identified glycine as a biomarker of muscle wasting, which is capable of accurately distinguishing between the two groups.
Image:



Conclusion: A ΔSMI>3.022 cm^2/m^2 during the first 7 days of ICU admission in patients with trauma predicts frailty 1 year post-discharge. Metabolic analyses may help identify new therapeutic targets for reducing acute skeletal muscle wasting and ultimately improving clinical outcomes.
Disclosure of Interest: None declared

O002

EVALUATION AND COMPENSATION OF PATIENT RELATED AND DIAGNOSTIC/THERAPEUTIC RELATED INTERRUPTIONS OF ENTERAL NUTRITION USING THE SMART+ PLATFORM. A POST HOC COMPUTERIZED ANALYSIS

I. Kagan *[,1], on behalf of Rabin Medical Center Beilinson Hospital Department of General Intensive Care Institute for Nutrition Research Petah Tlkva ISRAEL M. Hellerman-Itshaki [1], P. Singer [1]. [1] *Department of General intensive care, Institute for Nutrition Research, Rabin Medical Center, Beilinson Hospital, Petah Tlkva, Israel*

Rationale: Multiple obstacles exist to achieve enteral feeding targets defined as patient-related (PR) or diagnostic/therapeutic related (DTR) interruptions. A new technology was developed to adapt and compensate enteral feeding according to gastric tolerance as well as DTR interruptions (1). A post hoc analysis evaluated PR or DTR interruptions as well as the compensation achieved by the platform.
Methods: The compensation related to PR or DTR was analyzed in 45 patients from the study group (1). A computerized analysis detected all the PR and DTR interruptions . Analysis used only those days with at least 12 hours of active system. The system stopped feeding for ~20% of the working hours due to either PR or DTR. Compensation was programmed to provide 100% of the missing nutrition related to DTR interruptions and 50% of the measured GRV..
Results: From the 313 hospitalization days, 280 days were obtained with at least 12 hours of recording. Interruption occurred 20% of the time. 29 % of the interruption time was related to PR (a total mean of 75 min) and 71% to DTR interruptions (a total mean of 196 min). However, the feeding efficacy remained 89,3 % during the study period. Nutritional therapy close to 100% of the target was reached in 176 days (63%) from the included patients.
Conclusion: Interruptions of enteral feeding were mainly related to DTR interventions, but the platform was able to fully compensate them. The PR interruptions were only partially compensated. The smart + platform provides an effective tool to recognize feeding interruptions and to compensate them.
References: 1. Kagan I, Hellerman-Itzhaki M, Bendavid I, Statlender L, Fishman G, Wischmeyer PE, de Waele E, Singer P. Controlled enteral nutrition in critical care patients - A randomized clinical trial of a novel management system. Clin Nutr. 2023 Sep;42(9):1602-1609.
Disclosure of Interest: None declared

O003

GLIM PLUS PANDORA PREDICTS MORTALITY BETTER THAN OTHER INTENSIVE CARE MORTALITY INDICATORS: A SINGLE CENTER 180 DAYS FOLLOW-UP STUDY

A. Okyar Baş *[,1], M. Mermer [2], M. Eşme [1]. [1] *Department of Internal Medicine, Division of Geriatric Medicine, Hacettepe University, Ankara;* [2] *Department of nutrition and dietetics, Toros University, Mersin, Türkiye*

Rationale: Malnutrition strongly predicts mortality in intensive care unit (ICU) patients. Patient- And Nutrition-Derived Outcome Risk Assessment Score (PANDORA) is a mortality prediction tool encompassing nutritional assessment. We aimed to evaluate the benefit of adding PANDORA to the Global Leadership Initiative on Malnutrition (GLIM) criteria for mortality prediction in the ICU setting.
Methods: A total of 251 ICU patients were included. Besides the anthropometric measurements, malnutrition evaluation tools (GLIM criteria, Nutritional Risk Screening (NRS) 2002, Nutrition Risk in Critically Ill (NUTRIC) score), and mortality/disease severity tools (PANDORA, TAcute Physiology and Chronic Health Evaluation (APACHE) II, Sequential Organ Failure Assessment (SOFA)) were performed. Scores > 43 were defined as a high PANDORA score.
Results: The median age (IQR) was 67 (52-78) years; 47.0 % were female. Patients were evaluated according to 30th, 60th, 90th, and 180th-day mortalities. In all groups, patients were older, had a lower BMI and longer hospitalization time, more likely to have malnutrition and higher PANDORA, APACHE II, and SOFA scores. In the Cox regression analyses for all-cause mortality, even it is adjusted for age, sex, BMI, hospitalization duration, dementia and malignancy, having malnutrition according to GLIM criteria accompanied with a high PANDORA score had the highest HR for mortality for 30th, 60th, 90th, and 180th-days. (HR: 3.62; 95%CI: 1.49-8.77; p = 0.004, HR: 3.71; 95% CI: 1.69-8.12; p = 0.001, HR: 3.46; 95%CI: 1.69-7.06; p = 0.001 and HR: 4.00; 95%CI: 1.98-8.09; p = 0.004 for 30th, 60th, 90th, and 180th-days, respectively). (Table 1)