Results: 183 patients included, 62.3% were male and 37.7% female, mean age of 68.2 years. 62.3% suffered from neoplasm of the colon and 37.7% from the rectum.
Mean BMI was 27.5 ± 5.3 kg / m2, with a FFMI by anthropometry of 19.1 ± 2.8 kg / m2 for men (24.3% below 17 kg / m2) and 16.8 ± 2.6 kg / m2 for women (26.5% below 15 kg / m2). FFMI by impedanciometry was 20.5 ± 2.1 kg / m2 for men (4.1% below 17 kg / m2) and 17.4 ± 2.2 kg / m2 for women (13.3% below 15 kg / m2). Hand grip strength showed a mean of 33 ± 8.4 kg / m2 for men (21.3% below population p5 percentile) and 21.1 ± 4.5 kg / m2 for women (4.3% below population p5 percentile).
SGA found 37.2% of normonourished, 37.2% with moderate malnutrition and 25.7% with severe malnutrition (in total, 62.8% of malnourished or at risk). Using hand grip strength to apply GLIM criteria, 57.2% of malnourished patients were found. Using anthropometry we found 60.2% of malnourished patients, being 52.3% when using impedanciometry, (Kappa Coefficient of 0.53, 0.58 and 0.65 with SGA respectively; p <0.001).
Conclusion: The prevalence of malnutrition in the patients in our series is slightly higher than what is described in the literature. Hand grip strength, anthropometry and bioimpedanciometry are shown as useful alternatives for the determination of muscle mass in the application of the GLIM criteria, presenting a good concordance with SGA.
Disclosure of Interest: None declared

O30

DEXAMETHASONE ON POSTOPERATIVE GASTROINTESTINAL FUNCTION: A PLACEBO-CONTROLLED, DOUBLE-BLINDED, RANDOMIZED CONTROLLED TRIAL

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Rationale: Following abdominal surgery, patients usually experience a transient episode of impaired gastrointestinal motility. This study aimed to determine whether a single preoperative dose of dexamethasone can promote the recovery of gastrointestinal function in patients following elective gastrointestinal surgery.
Methods: In this single-center, two-arm, parallel, randomized controlled trial, we studied 126 patients (aged 18–80 years) who underwent elective open or laparoscopic bowel surgery for malignant or benign pathology. At the induction of anesthesia, a treatment group (n=64) received a single dose of 8 mg intravenous dexamethasone and a control group (n=62) received normal saline. The study was registered at http://www.chictr.org.cn (ChiCTR1900024000).
Results: Intravenous administration of 8 mg dexamethasone significantly decreased the time to return of flatus by an average of approximately 8 hours (p<0.05). Abdominal distension was significantly reduced on the third day after surgery in the dexamethasone group (p<0.05) and the time to tolerance of a liquid diet was shorter in the dexamethasone group (p<0.01). Patients in the dexamethasone group received more EN than that in the control group (p<0.05). There were no significant differences in other secondary outcomes between the two groups.
Conclusion: A single intravenous dose of 8 mg dexamethasone at induction of anesthesia significantly decreases the time to return of flatus, improves abdominal distension at 72 hours, and promotes tolerance to a liquid diet and more enteral nutrition. Although further studies are required to confirm our results, we recommend that dexamethasone be used more widely in gastrointestinal surgery.
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O31

INFLAMMASOME COMPONENTS AND OBESITY ONSET: NOVEL COMBINATION FOR COMORBIDITIES REVERSION AFTER BARIATRIC SURGERY

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Rationale: Obesity is associated with metabolic/inflammatory comorbidities, which can be reversed/improved after bariatric-surgery(BS), and influenced by obesity onset. Dysregulations in the inflammasome, a multiproteic complex that promotes cytokine maturation and induces cellular pyroptosis, have been associated to the development/stage of obesity. Whether the obesity onset affects the expression of inflammasome components and comorbidities reversal has not been yet explored.
Methods: Clinical variables of 178 patients were recorded. The expression of inflammasome components and associated inflammatory factors(n=45) was performed using a qPCR array (Fluidigm technology) in peripheral blood mononuclear cells of 22 patients before and 6-months after BS.
Results: The whole cohort included 62.4% females (mean age 46-y old); 49% presented with obesity since childhood. Metabolic comorbidities(68.9%) and reversion (67.6%)were higher in patients with later obesity onset (p<0.05). An overall dysregulation in inflammasome components, especially NOD-like receptors and cell-cycle/DNA-damage regulators, was observed. Early-obesity onset significantly affected the expression of inflammasome components before BS [NOD-like receptors(NLRP3), regulators of inflammasome activation (AIM2, ASC, CASP1, CASP5, IL1B, IL1RA, JNK2), cytokines and inflammation/apoptosis-related components(CCL8,IKKa, IL6R, MAPK14, P2X7, SIRT1) and cell-cycle/DNA-damage regulators (ATM)] and 6-m after BS(ATM, CCL2, CCL5,IKKa, NLRP1; p<0.05). Metabolic comorbidities and molecular changes 6-m after BS were also associated (p<0.05).
Conclusion: Obesity onset and metabolic comorbidities were associated. BS induces a drastic alteration in the expression of inflammasome components, which is modulated by obesity onset. The inflammasome molecular profile is associated to the presence/reversal of metabolic comorbidities, thus it might be used as novel diagnostic and therapeutic target in obesity.
Disclosure of Interest: None declared

O32

NEW DETERMINANTS OF LIVER STEATOSIS AND FIBROSIS IN OBESE PATIENTS: RESULTS OF A PROSPECTIVE CLINICAL STUDY

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Rationale: Obesity could lead to several metabolic alterations, including non-alcoholic fatty liver disease (NAFLD), muscle dysfunctions and gut dysbiosis. Here, we propose to evaluate the gut microbiota composition depending on the degree of NAFLD severity.
Methods: Obese patients recruited prospectively at St-Luc Hospital (FOOD4GUT project, Belgium) were included in this study. Liver stiffness and controlled attenuation parameter (CAP) measurements were performed using liver transient elastography (TE). Physical examination, blood and stool samples and computed tomography (CT) were also assessed. The fecal gut microbiota was analyzed by Illumina sequencing of the 16S rRNA gene.
Results: Liver TE allowed us to classify the patients in three groups based on CAP and stiffness measurement: LS (low steatosis, n=10), HS (high steatosis, n=18) and HS+F (high steatosis + fibrosis, n=9). CT data revealed significant muscle alterations in HS+F patients, with an increase of whole muscle area and a lower muscle density index compatible with muscle fat infiltration. Both α- and β- diversity indices of the overall gut microbiota composition were not different between groups. At the taxa level, only *Clostridium sensu stricto* significantly decreased with the severity of liver steatosis and fibrosis (*p=0.018 for HS+F vs LS*). However, an analysis based on amplicon sequence variants (ASV) revealed 20 bacterial sequences significantly affected. Spearman's correlations showed that *C. sensu stricto* was negatively associated with liver fibrosis, the waist/hip ratio and muscle fat infiltration. Interestingly, many ASV also correlated with clinical outcomes.
Conclusion: Liver steatosis and fibrosis severity associates with a set of markers including dysbiosis. Among them, *C. sensu stricto* decreased with the development of liver fibrosis and related muscle fat infiltration. Other bacterial ASV are pointed out as potential markers to be evaluated in larger cohorts to unravel their link with the degree of NAFLD related complication.
Disclosure of Interest: None declared

Critical Care

O39

MAGNITUDE OF PROTEIN CATABOLIC RESPONSE IN CRITICALLY ILL SUBJECTS IS ASSOCIATED WITH MULTIPLE AMINO ACID AND LIPOLYSIS RELATED METABOLIC DISTURBANCES

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Rationale: The presence of net protein catabolism is well established in most ICU patients. However, it remains unclear whether the magnitude of this catabolic response is accompanied by disturbances in specific amino acid and glycerol pathways.
Methods: 12 ICU patients suffering from trauma/surgery complications and hospitalized for more than 7 days were included and compared to 11 heathy age and gender matched volunteers. A comprehensive metabolic flux analysis was conducted in each subject by administering an intravenous pulse of multiple stable tracers of amino acids and glycerol (~lipolysis) followed by blood sampling for 1hr. Phenylalanine and tyrosine stable tracers were used to measure net protein catabolism. Blood samples were obtained to calculate production (WBP) and interconversion rates (umol/kg BW/h). Stats by t test and regression analysis (mean(SE)).
Results: The studied ICU patients were characterized by APACHE II score of 19 ± 8, SOFA of 5 ± 2, and mean ICU stay of 18.7 ± 9.3 days. All subjects were catabolic to the same degree as no food was provided (Healthy: 11.4 (1.4); ICU: 11.6 (1.9). However, a significant relationship was found between net protein catabolic response and WBP of arginine (p=0.0036), glycine (p=0.0008), phenylalanine (p=0.01), methionine (p=0.0001), tyrosine (p=0.0004), tryptophan (p=0.0002), histidine (p=0.0003), glutamine (0.0069), valine (p=0.0008), leucine (p=0.0076), ornithine (p=0.038) and glycerol (lipolysis: p=0.0039) and conversion of citrulline to arginine (p=0.01) and arginine to citrulline (NO synthesis: p=0.01). In addition, net protein catabolism was associated with reduced BMI (p=0.0076) and elevated body temperature (p=0.03) positively.
Conclusion: Although ICU patients on group level are not more catabolic than healthy subjects, the net protein catabolic response was associated with production of numerous amino acids and lipolysis, suggesting that protein intake may be a leading factor in modifying metabolism in ICU patients.
Disclosure of Interest: None declared

O40

THE INFLUENCE OF PHARMACONUTRITION IN THE INTENSIVE CARE UNIT: DOES IT IMPACT IN OUTCOMES?

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Rationale: There is a gap between the theoretical benefits of pharmaconutrition and the moderate benefit in clinical practice in the Intensive Care Unit (ICU) [1].The aim of the present research was to evaluate the impact of immunonutrition formulas (IMN) with standard enteral formulas in outcomes during the ICU stay.
Methods: National multicenter prospective observational study (37 hospitals) from April to June 2018, conducted in ICUs throughout Spain (NCT Registry: 03634943). Patient characteristics, calorie-protein dose, life support needs and mortality were evaluated. Statistical differences were analyzed according to the administration of IMN formulas and the type of patient.
Results: 525 patients who received enteral nutrition (EN) were included in the analysis, of which 406 (77%) received only EN. 16.57% of the patients received IMN formulas. The age was 61.33 ± 15.01 years, BMI: 27.86 ± 6.06Kg / m2, the majority were medical patients (68%), malnutrition was 38.58% (SGA) and the mean nutritional risk was 4.17 ± 2.14 (NUTRIC Score). The 28-day mortality was 26.1% and the IMN formulas were not associated with lower mortality compared to the other formulas when comparing the subgroup of survivors with non-survivors.
However, a lower need for vasopressor support (75.6% vs. 60.66%; OR: 0.490; 95% CI: 0.260-0.910; P = 0.023) and continuous renal replacement therapies (OR: 0.130; 95% CI: 0.010-0.650; P = 0.049) was observed in those patients who received IMN formulas copmared. The use of IMN formulas was associated with a higher average protein delivery during the nutritional therapy (0.74 ± 0.34vs0.9 ± 0.31g/Kg/d; OR: 6.230; 95% CI: 2.590-15.540; P<0.001).