

67015 HYPERGLYCEMIA WAS NOT A RISK FACTOR FOR MORTALITY IN MALNOURISHED CRITICALLY ILL PATIENTS

Luciana Verçoza Viana¹, Ana Laura Jardim Tavares², Luiza de Azevedo Gross², Vicente Lobato Costa², Tiago Tonietto¹, Rafael Barberena Moraes¹, Verçoza Viana¹

¹ Hospital de Clínicas de Porto Alegre – Universidade Federal do Rio Grande do Sul (HCPA-UFRGS). ² UFRGS

Introduction: Optimizing nutritional support in malnourished critically ill patients can improve their outcomes, but is frequently associated with hyperglycemia, a condition linked to an increased morbi-mortality. The aim of this study is to evaluate the relationship between glycemia, nutritional support and mortality in malnourished critical ill patients. **Methods:** In this two-center prospective cohort, malnourished critically ill patients (BMI < 20 kg/m²) were evaluated at 48-72h after admission in an ICU for caloric intake, protein intake and capillary glucose (CG) levels. CG values were used to classify hyperglycemic (CG > 180 mg/dl) or hypoglycemic (CG < 54 mg/dl) events. Glycemic variability was defined as the difference between maximum and minimum CG value in the same day. The cohort was followed until death or hospital discharge. **Results:** 4,236 were screened and 16% had a BMI < 20 kg/m². 342 patients were included (age 54.0 ± 17.3 years, 59.9% males, BMI 17.5 ± 2.1 kg/m², mortality 58.5%, median follow-up 21 [11-38.3] days). Their maximum and minimum CG (mean) were 164.2 ± 55.9 mg/dl and 108.4 ± 33.3 mg/dl, respectively. Median caloric/protein intakes were 864.0 [447-1223] kcal/day and 41.8 [14.0-65.0] g/day. Hyperglycemia occurred in 28.4% and hypoglycemia in 2% of the patients. Hyperglycemia was not correlated with caloric intake ($r = 0.049$; $P = 0.369$). Hyperglycemia was associated with older age (58 ± 15,6 *vs.* 52.2 ± 15.7 years; $p = 0.002$), higher glycemic variability (80 [58-134] *vs.* 34 [21.5-52] mg/dl; $p < 0.001$) and with type 2 diabetes (24.5 *vs.* 7.1%, $p < 0.001$). In multivariate analyses, hyperglycemia was associated with age (RR 1.03, 95% CI 1.004-1.046), previous diabetes (RR 2.86 95% CI 1.128-7.198) but not with severity of illness (SAPS3). Neither hypoglycemia nor hyperglycemia were associated with mortality. **Conclusion:** In critically ill malnourished patients, differently from eutrophic or overweight patients, hyperglycemia or hypoglycemia were not associated with caloric intake or mortality.