

## MALNUTRITION AND OUTCOMES IN A PERUVIAN PEDIATRIC INTENSIVE CARE UNIT

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**AIMS & OBJECTIVES:** To determine the association between malnutrition (MN) on admission to the PICU and child's outcomes: mortality, mechanical ventilation (MV) use and duration, PICU and hospital length of stay (LOS) and Healthcare Associated Infections (HCAI).

**METHODS:** Prospective cohort study, analytical observational design. All patients (ages 1 mo to 17 y) admitted to our PICU during 12 months were included. Children with the following conditions were excluded: history of prematurity in < 2 year olds, skeletal malformation, Down's Syndrome, brain death and mortality within the first 24 hours of admission. We measured weight (W) and height (H) in the first 48 hours of admission and calculated BMI, applying WHO definitions for nutritional diagnosis. W/H (< 2 y.o.) and BMI ( $\geq 2$  y.o.) were used.

**RESULTS:** 280 children (median age 47.1 months; PICU mortality 7.1%) were included; 72 (26%) had MN (20% undernutrition, 5.7% overweight/obesity). Only MV use was higher in MN children (88.9% vs. 78.4%,  $p = 0.049$ ). In the multivariate models, children with MN had lower HCAI frequency (OR: 0.13; CI 95%: 0.02 – 0.82), longer PICU stay (Coef  $\beta$  11.6; CI 95% 1.4 - 21.9) and longer MV days (Coef  $\beta$  1.3,  $p < 0.001$ ). In multivariate analysis comparing only undernourished with normal children, they showed longer PICU stay and MV duration

**CONCLUSIONS:** MN increased PICU stay and MV days, and was negatively associated with the development of HCAI. We found no association with PICU or hospital mortality.

## P0117 / #851

### EVALUATION OF THE APPLICABILITY OF KING'S COLLEGE CRITERIA TO DECIDE ON LIVER TRANSPLANTATION IN A PEDIATRIC CRITICAL CARE UNIT IN INDIA

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**AIMS & OBJECTIVES:** King's College Criteria (KCC) are used worldwide to refer patients with Acute Liver Failure (ALF) for liver transplantation. We aimed to evaluate the performance of KCC to predict

the need for liver transplantation in pediatric ALF (PALF). The secondary objective was to study the clinical profile of PALF.

**METHODS:** This study was conducted in a tertiary-care pediatric critical care unit in South India. Children aged 1 month to 18 years admitted with PALF between April 2014 and December 2019 were enrolled. Data regarding demographics, etiology and outcome were collected retrospectively. Acute liver failure was defined using the PALF study group definition. The primary outcome was transplant free survival.

**RESULTS:** During the study period, 131 children, 74 (56.1%) male, were admitted with PALF. Three underwent liver transplantation and were excluded from analysis. The main etiologies of PALF were infection (32.3%) indeterminate (23.1%) and paracetamol toxicity (20%). Of 40 children meeting KCC, 25 (62.5%) survived without transplantation, whereas of 88 children not meeting KCC, 57 (65.5%) survived without transplantation ( $p=0.84$ ). Peak ALT/Ammonia/Lactate, lowest albumin, presence of multi-organ dysfunction, inotrope requirement, mechanical ventilation and INR  $>4$  at any occasion were significantly associated with mortality. Positive predictive value of KCC (mortality among children who met KCC) was 37.5% while its sensitivity (ability of KCC to pick up children with poor outcome) was 32.6% in our study.

**CONCLUSIONS:** KCC are a poor predictor of the need for liver transplantation in PALF in this population. Infections were the commonest cause of PALF.

## P0118 / #862

### MORTALITY DISTRIBUTION BY NUTRITIONAL STATUS CATEGORY IN A PEDIATRIC INTENSIVE CARE UNIT

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**AIMS & OBJECTIVES:** The nutritional status of patients admitted to Pediatric Intensive Care Units (PICU) should be evaluated and considered as one of the factors that influence prognosis. We aimed to describe the distribution of mortality by nutritional status category of children and adolescents admitted to a PICU.

**METHODS:** Retrospective cohort study with patients admitted to the PICU from 01/06/2013 to 01/31/2017. To assess and classify nutritional status, the Body Mass Index for Age (BMI/A) z-score was calculated based on the World Health Organization (WHO) curves. Expected mortality was assessed according to the Pediatric Index

