

Conclusion: On the first day of admission to the PICU, children with septic shock and EF <5% had higher plasma TNF- α and IL-10, but varying degrees of activity of NF- κ B in the nucleus, measured indirectly by I- κ B α gene expression. Thus, instead of inhibition, modulation of the activity of NF- κ B may be a useful therapeutic strategy for septic patients, based on individualized assessment of the inflammatory state by studying the concentrations of cytokines and the activity of NF- κ B.

16. LOAD/FORCE RATIO INDEX: RISK FOR EXTUBATION FAILURE IN CHILDREN WITH NEUROLOGICAL DISORDERS?

Nathalia Mendonça Zanetti,¹ Cintia Johnston,¹ Nilton Ferraro Oliveira,¹ Werther Brunow Carvalho²; ¹Federal University of São Paulo; ²University of São Paulo

Objective: To determine whether the load-force ratio (LFR) index is a predictor of extubation failure in children with neurological diseases.

Method: A prospective cross-sectional study (January/2008-May/2009) of children with cuffed endotracheal tube, suitable for extubation after a weaning protocol (FiO₂ \leq 50%, PEEP < 7 cmH₂O, underlying disease controlled, Ramsay \geq 3, hemoglobin \geq 10 g/dl, without electrolyte disturbances, screened with pressure support ventilation (PSV 7-10 cmH₂O for 30 minutes). Following PSV, variables were measured: LFR [(15xMAP)/MIP + (0.03xRS-5)]. Failed extubation was considered as reintubation within 48 hours. The comparison of LFR between success and failure groups was analyzed with the Kruskal-Wallis test, the cutoff point, sensitivity and specificity, by the ROC curve.

Results: 679 admitted, 346 (50.96%) underwent mechanical ventilation; (success: failure 54.7); age 66 (5-228) months, weight 14.25 (2.4-54) kg. Comparison success vs. failure: age 67.5 (6-228) vs. 40 (5-192) months, $p = 0.703$; weight 16 (2.4-54) vs. 11 (6-30) kg, $p = 0.167$; time on mechanical ventilation 2 (0-50) vs. 6 (1-16) days, $p = 0.061$; PIM 6.82 (0.17-38.4) vs. 5.01 (0.96-20.8), $p = 0.347$; Glasgow 13 (10-15) vs. 11 (10-14), $p = 0.025$; LFR -0.99 (-3.25-20.69) vs. 4.7 (2.01-10.39), $p < 0.001$; ROC curve: area 0.59, $p = 0.32$, RR 1.36 (95% CI: 0.50 to 1.59). Cutoff with better sensitivity (85.7%) and specificity (87.8%) = 2.45 with an area under the curve of 86.75 for failure.

Conclusion: LFR is a predictor for extubation failure in children with neurological diseases with high sensitivity and specificity.

17. BONE MINERALIZATION IS ENHANCED WHEN FM85 SUPPLEMENT IS ADDED TO HUMAN MILK OF VERY LOW BIRTH WEIGHT NEONATES

Paulo Roberto Einloft, Cristian Tedesco Tonial, Greice Birk, Rita Terres, Angelica Barba Rueda, Felipe Cabral, Renato Machado Fiori, Humberto Horner Fiori, Jefferson Pedro Piva, Pedro Celiny Garcia; Neonatology and Pediatric Intensive Care Divisions of Hospital São Lucas, School of Medicine, Pontifícia Universidade Católica do Rio Grande do Sul - PUCRS - Porto Alegre- RS

Objective: To evaluate the efficacy of a supplement (FM85®, Nestle Nutrition) to improve bone mineralization and growth of very low birth weight preterm neonates (VLBWPTN) fed with human milk.

Methods: We studied VLBWPTN under 1500g birth weight during hospitalization in the neonatal intensive care unit between July 2006 and January 2010. The neonates were divided into two groups: group 1 received human milk with FM85® and group 2 received human milk without FM85®. Anthropometric measurements were recorded. Bone mineralization was assessed by whole-body bone densitometry with dual energy X-ray. Throughout the study, control laboratory tests were conducted as serum alkaline phosphatase, calcium and phosphorus, and urinary calcium and phosphorus.

Results: Nineteen VLBWPTN who received human milk with FM85® were compared to 19 VLBWPTN who received only human milk. The two groups showed no significant differences at the beginning and at the end of the study in relation to age, weight, length and head circumference. Alkaline phosphatase was higher in the group that did not receive the FM85® supplement (720 \pm 465 IU vs. 391 \pm 177 IU, $p = 0.007$). Bone mineral content was higher in FM85® group at the end of the study (10.39 \pm 4.71 g vs. 6.19 \pm 3.23 g, $p = 0.003$). Likewise, bone mineral concentration per kg was greater in FM85® group (5.29 \pm 2.5 g/kg vs. 3.17 \pm 1.6 mg/kg; $p = 0.005$).

Conclusions: Our data suggest that supplementation of human milk with FM85® leads to an enhancement of bone mineralization in VLBWPTN.

18. EVALUATION OF THE PROGNOSTIC SCORES PRISM AND PIM IN PEDIATRIC INTENSIVE CARE

Marco Valadares, Juliana Gomes, Annie Oliveira, Enaldo Vieira; Federal University of Sergipe

Objectives: To evaluate the accuracy of PRISM and PIM in two pediatric intensive care units (PICU), by analyzing the relationship between observed mortality and estimated mortality by the two scores.

Methods: We conducted a non-interventional contemporary observational cohort study. The study included patients aged 29 days to 12 years admitted to the PICUs from October 2011 to March 2012. We excluded patients who died or were discharged within 24 hours of admission or who were transferred to other PICUs. Data were prospectively collected during hospitalization, by filling in forms with the physiological and laboratory variables of the respective scores.

Results: Over the study period, 112 patients were admitted, 9 (8%) were excluded. The sample consisted of 103 patients, of whom 36.9% were female and 63.1% male. The cause of

hospitalization was clinical in 86.4% of cases and surgical in 13.6%. In the PICU from the private institution, mortality rate was zero, with PRISM 2.4% and PIM 8.8%. In the PICU from the public institution, mortality rate was 30.3%, with PRISM 21% and PIM 25.7%.

Conclusions: PRISM and PIM scores showed no significant difference between them and were effective, with good ability to discriminate survivors and non-survivors, providing tools with comparable performance in prognostic evaluation of patients in these pediatric ICUs.

19. USE OF WeeFIM SCALE IN THE POSTOPERATIVE PERIOD AFTER SURGERY FOR CONGENITAL HEART DISEASE

Fabrizio Lepretti, Cindy Martinez, Cristina Panizza, Renee Szwako, Carlos Veron, Noelia Arevalo, Milagros Vargas; Hospital Clinicas Universidad Nacional Asuncion

Introduction: Corrective surgery for congenital heart disease has functional consequences in acute and subacute phase after surgery, affecting the motor function of these children, sometimes with motor function limited by the cardiac disease, therefore limiting daily activities, causing physical dependence in the subacute stage. The Pediatric Functional Independence scale (WeeFIM®) assesses restrictions in functional activities. It was validated in patients with cerebral palsy, Down's syndrome and normal children, and analyzes the objectives and results of physiotherapy rehabilitation treatment.

Objectives: To evaluate disability in pediatric patients with congenital heart disease after surgery.

Methods: An observational, longitudinal, prospective, descriptive study at Hospital Clinicas Universidad Nacional Asuncion. Sixty-eight patients aged 1-17 years were assessed after surgery on 3 occasions: at the Pediatric Cardiovascular Intensive Care Unit after extubation, at the cardiology room and at hospital discharge. Patients were classified by the scale as dependent, modified dependent and independent. The type of heart disease and the use of cardiopulmonary bypass were considered. The work was under informed parental consent, and was approved by the ethics committee.

Results: The interobserver reproducibility was kappa 0.93 and the intraobserver reproducibility was 0.96. Average age: 1790.2 days. Following extubation there was 100% dependence in daily activities, 83.8% at discharge to the cardiology room, and 45.6% were still in a state of complete dependence at hospital discharge, most of them with severe cyanotic heart disease.

Conclusion: This scale was used to evaluate the dependence of patients with heart disease after surgery. In our study, a high percentage of children were discharged from the hospital with physical dependence. Further studies are needed to relate to severity.

20. ABNORMAL MYOCARDIAL RELAXATION IS ASSOCIATED WITH HIGHER LEFT VENTRICLE MASS-TO-VOLUME RATIOS IN OLDER CHILDREN AFTER ORTHOTOPIC HEART TRANSPLANTATION

Fabio Carmona,^{1,2} Satish Rajagopal,² Christopher Almond,² Francis Fynn-Thompson,² Wayne Tworetzky,² Kevin Friedman²; ¹Faculty of Medicine of Ribeirão Preto, University of São Paulo, ²Children's Hospital Boston, Harvard Medical School

Introduction: Diastolic dysfunction is common following orthotopic heart transplantation (OHT), and is associated with rejection and mortality. Myocardial velocities assessed by Tissue Doppler imaging (TDI) have been reported to be impaired, even in the absence of rejection. However, little is known about the pathophysiology of such alterations.

Methods: Retrospective study of all patients < 18 years undergoing orthotopic heart transplantation at Children's Hospital Boston between 2006 and 2010. Clinical, surgical, hemodynamic, and echocardiographic data were recorded, including TDI measurements. All echocardiographic measurements were converted to z-scores. Correlations were assessed by Pearson and Spearman coefficients, and differences between age groups were tested using Student's t test.

Results: Forty-eight subjects were included in the analysis, with a median age of 10 years (2.7 months-17.1 years). Inter-observer variability was very low for left ventricle early diastolic myocardial velocity (LV E', ICC=0.960, $p < 0.001$). In the whole cohort, LV E' was lower in older patients with an inverse correlation ($r = -0.522$, $p < 0.001$), while LV mass:volume ratio was higher in older patients ($r = 0.459$, $p = 0.001$). Higher LV mass:volume ratio correlated with lower LV E' ($r = -0.555$, $p < 0.001$) and higher mitral valve early diastolic flow (E/E') ratio ($r = 0.303$, $p = 0.04$). Compared to the younger, children older than 8 years had significantly lower LV E' velocity (-3.30 \pm 1.23 vs. -1.53 \pm 1.15, $p < 0.001$), and higher LV mass:volume ratio z-scores (6.39 \pm 3.87 vs. 3.02 \pm 2.55, $p = 0.001$).

Conclusion: In children who have undergone OHT, diastolic dysfunction is common and is associated with older age and higher LV mass:volume ratios.

21. EVALUATION OF THE ACCURACY OF THE CLINICAL DIAGNOSIS OF THE CAUSE OF DEATH IN THE PEDIATRIC INTENSIVE CARE UNIT OF A TERTIARY CARE UNIVERSITY HOSPITAL

Letícia Graziela Bacheche, Ana Paula de Carvalho Panzeri Carloti, Fernando Silva Ramalho; Faculty of Medicine of Ribeirão Preto of University of São Paulo

Objective: To evaluate the discrepancies between clinical diagnoses and autopsy findings in patients who died in the pediatric intensive care units (PICUs) of Hospital das Clínicas of Faculty of Medicine of Ribeirão Preto of University of São Paulo (HCFMRPUSP).

Methods: A prospective study of autopsies of patients who died in the PICUs of HCFMRPUSP during a one-year period. Discrepancies between clinical diagnoses and autopsy findings were classified according to the criteria of Goldman et al.