Assessment of pediatric logistic organ dysfunction score and its impact on mortality of pediatric intensive care unit patients in a tertiary government hospital: A prospective observational cohort study

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Background: Estimation of disease severity and probability of death are essential in determining the prognosis.

Objective: Analyze the prognostic value of pediatric logistic organ dysfunction (PELOD) score in the presence of organ dysfunction.

Design & Setting: A prospective observational cohort study conducted in the pediatric intensive care unit (PICU) of a tertiary government hospital in the Philippines.

Participants: All prospective admissions from term newborn to <19 years of age from July 15, 2016 to July 14, 2017. Eighty three subjects were enrolled.

Main Outcome Measures: PELOD score was calculated on the first 24 hours of admission. Outcome measures as survival or non-survival was recorded.

Results: Of the 83 patients, 51 (61%) were male and 32 (39%) were female; with mean age of 5 years old and median length of stay of 5 days. Mortality rate was 43.4%. PELOD scores of non-survivors was significantly higher (p<0.001) than survivors 55% had multiple organ dysfunctions syndrome (MODS) upon admission with 100% mortality rate for organ dysfunction of ≥4. ROC analysis for predicting death was 0.827 (95% CI, P<0.001) indicating a very good discriminatory ability. PELOD score of 15 correlated with 50% probability of death and risk ratio analysis (P<0.001) reveals the risk of dying of patients with PELOD score >15 is 3.3x that of ≤15.

Conclusion: PELOD score is a reliable prognostic predictor of mortality. Cardiovascular and neurologic dysfunctions were highly associated with mortality. Increasing number of organ dysfunction was correlated with increasing PELOD scores and mortality rate.

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