

عنوان مقاله:

Severity of organ dysfunction in pediatric intensive care using PELOD-2

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خلاصه مقاله:

Objective: Organ dysfunction is an important factor determining the severity and outcome of critical illness in children. Organ dysfunction scores are based on the number of organs involved and the severity of dysfunction in each. This study aimed to evaluate organ dysfunction using PELOD-2 in critically ill children. **Methods:** This prospective observational study included all consecutive critically ill children with organ dysfunction aged one month to 15 years admitted to pediatric intensive care unit of a Ramaiah Medical College Hospital, Bangalore between January 2018 and December 2020. The severity of organ dysfunction was scored using Pediatric logistic organ dysfunction-2 (PELOD-2) and evaluated based on the outcome using SPSS and PASW statistics for Windows version 18.0. The sample size required for the study with 95% confidence level and 10% relative precision was 149 critically ill children. The children were classified based on the presence of single and multiple organ dysfunction. Demographics and laboratory parameters were compared between the two groups using non parametric tests. The factors affecting mortality among children with multiple organ dysfunction were assessed using univariate and multivariate analysis. **Results:** Of the 550 children admitted with critical illness during the study period, organ dysfunction was present in 84% of the patients. Of these, 43% had multiple-organ dysfunction. The median (interquartile range) of the patients was 5.5 (1, 11) years with a male-to-female ratio of 1.7:1. The mortality rate was 14.4%. The PELOD-2 score and mortality steadily increased with the number of organs involved. The presence of more than two organ dysfunctions had an odd ratio (OR) of 45.7 for mortality (95% CI: 18.9-110.6, P value < 0.001). The area under the receiver operating curve (ROC) for predicting mortality using the number of organs affected was 0.96 (95% CI: 0.94-0.97, P value < 0.001). Dysfunction in more than two organs had a sensitivity of 92.5% and a specificity of 91% in predicting mortality. The presence of cardiovascular dysfunction and the need for ventilation were found to be independent predictors of mortality. **Conclusion:** The presence of more than two organ dysfunctions in PELOD-2 increased the risk of mortality; the need for ventilation and the presence of cardiovascular dysfunction were independent predictors of mortality.

کلمات کلیدی:

Critical illness, children, mortality

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