

Abstract

Introduction

The primary goal of the management in Paediatric Intensive Care Unit (PICU) is to minimize the mortality and morbidity following critical illness. It is vital to identify and provide maximum care for favourable outcome in resource limited settings.

Objectives

To apply and validate the PRISM III score, for the Sri Lankan children.

Method

A prospective survey of paediatric patients under 14 years admitted to PICU, Lady Ridgeway Hospital was conducted. Patients who are from surgical units and who don't stay for more than 2 hours were excluded. PRISM score was calculated on admission and the patients were followed up until death or discharge. Sensitivity, specificity, predictive values and likelihood ratios were computed for suggested cut-off values. Multiple logistics regression was performed to identify associated prognostic factors.

Results

There were 289 patients, median age 55 months (Q1-7, Q3-100), and the majority were males (83.5%). Observed mortality rate was 19% (males - 44%, females - 21.2%). On admission, the median days of illness were three days (Q1 -1, Q3 -7.5). Best statistics are shown at the total score of 10 as the cut-off with the sensitivity (74.5%), specificity-89.2%, positive predictive value (PPV) -62.1%, Negative predictive value (NPV)-93.7%. The likelihood ratios for the positive and negative tests were 6.92 and 0.285, respectively, and the area under the curve (AUC) was 0.819(0.741 - 0.891). The Cohens Kappa was 0.46 (0.27-0.64). Other significantly associated mortality factors were administering adrenaline dose 0.1mg and need of mechanical ventilation ($P < 0.05$).

Conclusion

The proposed validated reliable cut off value for PRISM III score for Sri Lankan children is 10.