COMPARISON OF THE APACHE II AND GCS SCORES IN PREDICTING OUTCOMES IN PEDIATRICS ADMITTED TO ICU

Mohammad Hosseini* , Jamileh Ramazani

Introduction: APACHE II is one of the most general classification systems of disease severity in ICUs and GCS is one of the most specific ones. The aim of the current study was to assess APACHE II and GCS ability in predicting the pediatrics outcomes (survivors, non-survivors) in the ICU.

Methods and Material: This was an observational and prospective study of 42 consecutive patients admitted in the ICU during six month period. Demographic information recorded on a checklist, also information about Severity of disease Calculated based on APACHE II scoring system in the first admission 24 hours and GCS scale. Logistic regression, Hosmer-Lemeshow test and receiver operating characteristic (ROC) curves were used in statistical analysis (95% confidence interval .(

Results: Data analysis showed a significant statistical difference between outcomes and both APACHE II and Glasgow Coma Score (p<0/001). The ROC-curve analysis suggested that the predictive ability of GCS is slightly better than APACHE II in this study. For GCS the area under the ROC curve was 83.2% (standard error [SE] 3.6%), and for APACHE II it was 82.4% (SE 3.2%), also the Hosmer-Lemeshow statistic revealed better calibration for GCS ($\chi2 = 4.231$, P = 0.529), than APACHE II ($\chi2 = 11.176$, P = 0.398.(

Conclusions: The survivors had significantly lower APACHE II and higher GCS score compared to non-survivors, also GCS showed more predictive accuracy than APACHE II in prognosticating the pediatrics outcomes in ICU .

Key-words: APACHE II, GCS, Pediatrics, ICU, Outcomes