A New Prehospital Score to Predict Hospitalization in Trauma Patients


Shahrokh Yousefzadeh Chabok, 1 Sara Ramezani, 1 Leila Kouchakinejad, 1 and Zahra Saneei 1

Guilan Road Trauma Research Center, Guilan University of Medical Sciences, Rasht, Iran, 1 Department of Neurobiology, Division of Family Medicine, Karolinska Institute, Alfred NobelsAllé 141 83 Huddinge, Sweden, 2 Safety Promotion and Injury Prevention Research Center, Shahid-Beheshti University of Medical Sciences, Tehran, Iran

Abstract

**Background:** Prehospital scores are used for determining the prognosis of trauma severity in trauma patients. **Objectives:** This study aimed at developing a new prehospital score for emergency medical service (EMS) staff to predict hospitalization in trauma patients transferred to the hospital. **Patients and Methods:** This study was a diagnostic test evaluation conducted on data of 1,185 traumatic patients transferred through EMS to Poursina Hospital of Rasht between March 2012 and March 2013. Data were collected using a questionnaire with two parts. The first part included data on demographics, injury, and type of interventions performed at the scene of the accident. The second part consisted of initial evaluations (Glasgow coma scale (GCS), oxygen saturation (O2S), pulse rate (PR), systolic blood pressure (SBP), the ability to walk, and outcome (hospitalization, nonhospitalization). The questionnaire was filled out by EMS staff at the scene or during transfer to the hospital with respect to clinical observations. Data were analyzed using the logistic regression model. The Hosmer–Lemeshow test was also used to examine the good fit of model. **Results:** A total of 1,185 patients were evaluated using prehospital data. Of seven variables evaluated by the scoring system, only four variables were identified in the regression analysis as predictors of hospitalization including age, SBP, O2S, and walking ability. Sensitivity, specificity, and positive and negative likelihood ratios were 0.67, 0.68, 2.09, and 0.48, respectively. **Conclusions:** The GOMAAPS (GCS, O2S, mechanism of injury, age, ability to walk, PR, and SBP) score serves as a guide for the EMS staff at the scene to be understood of the necessity of transfer and predicting hospitalization. **Keywords:** Hospitalization, prehospital, score, trauma