Article: 0712
Topic: EPW26 - e-Poster Walk Session 26: Depression part 2

A Risk Prediction Model of PSD in Stroke Survivors

R. Liu[1], Y.Y. Yue[2], H. Jiang[2], J. Lu[1], Y.G. Yuan[2], Q. Wang[1]

[1]School of Information Science and Engineering Southeast University, Southeast University, Nanjing, China ;

[2]Affiliated ZhongDa Hospital of Southeast University Medical School of Southeast University, Southeast University, Nanjing, China

Objectives: Finding the prediction factors for the risks of post-stroke depression (PSD) is important to stroke survivors. However, most existing studies focused only on general clinical data, which limited the predictive ability. To improve the predictive ability, this study proposed a comprehensive PSD risk prediction model with social psychological factors, neurological, cognitive functional factors and general clinical factors.

Methods: The study recruited 188 stroke patients. Patients were diagnosed by DSM-IV criteria. Predictors were collected within a week after stroke. Boosted regression trees (BRT) was used to classify these predictors, and then a predictive model was constructed based on the selected predictors. The receiver operating characteristic (ROC) curve was used to determine the performance of the predictive model .

Results: The risk prediction model was constructed with 6 factors: Body Mass Index (BMI) , cerebral infraction history (CI), Social Support Rating Scale (SSRS), Eysenck Personality Questionnaire-Neuroticism (EPQ-N), factor 1 of the 20 items Toronto Alexithymia Scale (TAS-F1) and Snaith-Hamilton-Pleasure Scale (SHARPS). In the contribution of risk prediction factors, social psychological factors was more than 0.60. ROC curve of prediction model was 0.826 (p<0.001; 95% CI) and the accuracy of prediction was 0.81 (p<0.001). Transforming the prediction model to a tree diagram, it was convenient to clinic operation.

Conclusions: A PSD risk prediction model with good prediction performance was constructed to achieve diagnose concisely and clearly. The social psychological factors play an important role for diagnosing PSD in the early period.

Key Words: post-stroke depression, risk prediction model, boosted regression tree

https://doi.org/10.1016/S0924-9338(15)30562-9 Published online by Cambridge University Press