VALIDATION OF A CLINICAL PREDICTION RULE FOR AMBULATION OUTCOME AFTER NON-TRAUMATIC SPINAL CORD INJURY

INTRODUCTION

People who have sustained a spinal cord injury (SCI) prioritize return to walking as a key outcome. Predicting the ability to walk is of utmost importance in the clinical setting. This study aims to validate a Clinical Prediction Rule (CPR) for ambulation in a non-traumatic SCI (NTSCI) population.

METHODS

A prospective cohort study of adults with confirmed NTSCI recruited between April 2013 and July 2017. Data based on the original CPR were collected from participant's medical records and by interview. The SCIM item 12 was used to quantify the ability to walk at 6 and 12 months. A receiver operator curve (ROC) was utilised to determine the performance of the CPR.

RESULTS

The area under the ROC curve (AUC) was 0.935 confidence interval (CI) 0.855-1.00, similar to the results of the original study (0.956, 95% CI 0.936-0.976). The CPR predicts who will not walk with a high degree of accuracy (22/23, 96%). It predicts who will walk less accurately (21/29, 72%), particularly for those aged over 65 years (4/9, 44%) vascular diagnosis (4/9, 44%) and those with an AIS C classification (6/11, 55%).

CONCLUSION

Overall, the AUC for this CPR performs comparably with previous studies in traumatic SCI. The rule is very accurate in predicting those who will not walk in this cohort. In those it predicts will walk accuracy appears to be impacted by age, diagnosis and injury classification. Further research with larger sample sizes is required to determine if the trends identified in this study are generalisable.