



Title: Traumatic spinal cord injury caused by low falls and high falls: a comparative study

Author / Authors: Fangyong Wang

Capital Medical University/China Rehabilitation Research Center, Beijing, China

Abstract

Background: Quite a few traumatic spinal cord injuries (TSCI) were caused by falls. However, the comparison of different causes of TSCI or the epidemiological characteristics of TSCI caused by falls of different heights are rare. This study investigated the epidemiological characteristics of TSCI caused by falls and conducted a comparison between low falls and high falls.

Method: Data from cases with TSCI admitted to China Rehabilitation Research Center from 2010 to 2019 were collected, including age, gender, occupation, cause, neurological level, and severity of the injury in admission, combined injuries, complications, and rehabilitation length of stay. Mann-Whitney U and chi-square (χ^2) tests were used to assess the differences between two groups at a statistical significance level of 0.05.

Result: A total of 1858 TSCI cases were included and 41.7% were caused by falls, 11.4% by low falls and 30.3% by high falls, respectively. Patients with fall-induced TSCI were older and had a shorter rehabilitation length of stay than those with non-fall-induced TSCI. Patients with high fall-induced TSCI were younger and more likely to suffer from paraplegia, severer injuries, and combined injuries, and had longer time from injury to rehabilitation and rehabilitation length of stay, compared with patients with low fall-induced TSCI.

Conclusion: Falls is the leading causes of TSCI and high fall is becoming more common. Attention not only should be paid to high falls for the severe injury and longer hospitalization, but also low falls due to the higher neurological level of the injury and the aging of population in China.