

# One-year Survival after Traumatic Spinal Cord Injury

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## Abstract

**Objective:** To examine one-year survival and its determinants among persons with traumatic spinal cord injury (SCI). **Method:** To investigate the materials of SCI patients from July 1, 1999 to June 30, 2004 by reviewing medical records of 5 hospitals. In addition to using death registration system of the Department of Health in Taiwan, follow-up phone calls were also conducted to crosscheck the survival and cause of death. The proportional hazards model was used to identify risk factors for the one-year survival. **Results:** Among 714 eligible patients, 674 were followed up for one year. The survival rate in the first year postinjury was 88.3%. In the first month and first year postinjury, the first leading cause of death was unintentional injuries (78% and 59.5%). The proportional hazards model found that, if age at injury increased 1 year, the risk of death enhances 5%. The hazards ratio of the pedestrian to motor vehicle traffic accident was 3.52 [95% confidence interval (CI) 1.28 to 9.71]. In the neurological class compared to motor function and key muscles grade of 3 or more, the hazards ratio of no motor and sensory function, sensory function, and motor function but key muscles grade less than 3 were 17.7 (95% CI 9.04 to 34.7), 8.68 (95% CI 3.82 to 19.8), and 3.09 (95% CI 1.35 to 7.09) respectively. When the injury severity score (ISS) increased 1 point, the risk of death enhances 7%. **Conclusion:** The survival rate after the first year postinjury among traumatic SCIs and the first leading cause of death was unintentional injuries. Furthermore age at injury, type of injury cause and injury severity significantly influenced the survival of the first year postinjury for patients with traumatic SCI.